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ESSAYS AND CASES.

ART.—I. *Some Remarks on the Pathology and Treatment of Dysmenorrhœa.* By JOHN EBERLE, M. D., &c. &c.

The pathology of this very common and painful affection of females, does not appear to be well understood. Some writers, and among these Dr. Dewees, seem to think that this complaint depends invariably on the formation of a pseudo-membranous substance over the internal surface of the uterus, by which the orifices of the menstrual exhalents are obstructed. Such membranous structures are indeed frequently present in this disease, and they unquestionably impede menstruation where they do exist. It is nevertheless equally certain, I think, that difficult and painful menstruation, sometimes recurs without any such mechanical impediment. I have known young females invariably afflicted with extreme pain at each catamenial period for several years, without the discharge of any substance of this kind. It must moreover be observed that painful menstruation is by no means always attended with a scanty flow of the menstrual fluid. Burns makes this observation; and I have myself met with several remarkable instances of this kind.

Dr. Dewees observes that there are two distinct states of this affection. In one the mammæ sympathise with the uterus, and become tumid, and more or less painful. In the other no perceptible alteration in the state of the breasts occurs. The former of these varieties, he says is much more manageable than the latter, and this accords entirely with my own experience. The Dr. does not offer an explanation of this circumstance. It appears to me to admit of one. I have observed for instance, that in nearly every case where the breasts become tumid and painful, the concreted pseudo-membranous substance (if any is cast off) is thick and of much consistence; and in those where the mammæ do not sympathise, it is usually thrown off in the form of a thin membrane. In the former case, the cavity of the uterus is much more distended, approaching the condition of early pregnancy; and we may presume that this state would be most apt to awaken the uterine sympathies, and thus to excite the mammary glands. Such cases too are more readily removed, because much less expulsive effort is necessary to separate and expel a considerable mass, than a thin membraneous concretion adhering to the inner surface of the uterus.

Dr. Dewees' views concerning the pathology of this affection, appear to me not only contrary to sound pathological principles, but most unequivocally also to the import of its essential phenomena.

"In another place," "he says," I have declared, that the menstruous fluid is the product of a secretory process. I have there given my reasons for this opinion: I therefore now assume it as a principle; and upon this principle, attempt to account for the formation of the membranous production, so often yielded in dysmenorrhœa. But, before I attempt an explanation of the formation of this membrane, I must again direct attention to a very remarkable circumstance in the character of the menstrual blood, namely, its not possessing the property of coagulation. From this, it appears that the blood, or a part of it, has suffered some change by the action of the uterine vessels; and that this change has been imposed upon the

coagulating lymph. by the process of secretion. I have assigned reasons for this change ; when speaking of menstruation. Now, it is not difficult to suppose that the uterus, like every other organ, may have its functions impaired ; in consequence of which the texture of the coagulating lymph, instead of being subdued as it is wont to be, when the uterine secretory action is perfect, it remains nearly the same as when it entered this viscus ; except, that it may be attenuated, as in some inflammatory diseases : and it will from this imperfect elaboration, be thrown into the cavity of the uterus, without being dispossessed of the power of separation, and of coagulation. It is poured into the uterus in a very gradual manner ; and, from this circumstance, may tarry there sufficiently long to separate into its constituent parts ; the coloured part, or red globules, from their greater weight, will leave the imperfectly subdued coagulating lymph, and fall to the bottom of the uterus, and sooner or later be discharged ; while the coagulating lymph, either in part or altogether, will be left to spread itself over the internal face of the uterus, and these quickly assume, as is usual with it when in contact with living parts, the appearance of a membrane."

From these observations, it appears that the Doctor considers a weak state of the uterus, or rather an impaired secretory function of this organ as the immediate cause of the production of the membrane in question. Unquestionably the menstrual action is deranged, but so far from this derangement, being the result of deficient uterine excitement, all the attending phenomena of the disease favor the idea that the excitement in the whole uterine system is morbidly increased, and that it approaches to the state of inflammation. The sense of fulness and pain in the pelvis, loins and thighs—the accelerated and often tense pulse—the hot and feverish skin, decidedly indicate a congested and irritated state of the pelvic organs. Analogy also affords us good grounds for this opinion. Lymph is never thrown out so as to form membranous concretions except from inflamed or highly irritated surfaces. The formation of such membraneous structures is indeed generally

regarded as the most certain evidence of previous inflammation of the part upon which they appear. The opinion that dysmenorrhœa is a sub-inflammatory or highly irritated state of the internal surface of the womb, or of the uterus generally, is moreover supported by the fact that all *active or stimulating* emmenagogue remedies almost invariably, greatly aggravate the painful symptoms of the disease. Would this be the case if the disease depended on an impaired action of the uterine vessels? The general or constitutional habit apparently most favourable to the occurrence of this disease goes also to confirm the view I have taken of its character. It is seldom met with in debilitated, relaxed and phlegmatic habits. Robust irritable and sanguineous young females are most subject to it.

In consequence of impaired function of the secretory vessels, the blood, says Dr. Dewees, is thrown out with its power of coagulation and separation undiminished. In what then does it differ from ordinary hæmorrhage? In nothing, it would appear, according to his notion, except that "the lymph is perhaps somewhat attenuated as in some inflammatory diseases." But if membraneous encrustations of lymph arose from the slow effusion of coagulable blood, ought we not to meet with such structures in slow uterine hæmorrhages where the blood retains its power of coagulation and separation? This however does not occur.

I presume that the uterine vessels in this affection are much congested, and in a state of morbid irritability terminating in high irritation or subinflammatory action. The discharge at first flows for a short time, but the action of the secretory vessels soon transcends the grade of menstrual secretion, and instead of the regular catamenial fluid, lymph only is secreted by the irritated vessels, giving rise to the membranous structures in question.

From much attention to this affection, I am inclined to regard it as frequently of a rheumatic character. I have seen it alternate in two individuals with rheumatic pains in the joints of the inferior extremities, and I have succeeded frequently in removing it completely by the remedies deemed most effectual

in rheumatic complaints. That rheumatism is apt to fix upon the uterus has been repeatedly observed. Cazenave states that he has frequently known rheumatic inflammation to fix upon the womb, and to give rise to very painful affections in this organ.* I have lately met with a striking instance of this kind. A young lady had been subject for many months to occasional pain and swelling of the knees, elbows, and wrists. Her menstrual functions continued regularly. Six months ago, she took flowers of sulphur to relieve her rheumatic affection. The articular pains and inflammation subsided, but she has since suffered extremely at each menstrual period, from the ordinary symptoms of dysmenorrhœa.

I shall not enter into a detail of the various remedies and modes of treatment that have been recommended in this affection. It may be sufficient to say, that the best palliative during the presence of the disease, so far as my own experience enables me to decide, is opium with camphor and ipecac. For the radical cure of this affection, Dr. Dewees recommends the tincture of guaiacum, and it is without doubt entitled to considerable attention as a remediate agent in this complaint. I have used it with success in a few cases, though I have been frequently disappointed with its employment. The remedy which I place most confidence in is the extract of the *stramonium*, or the tincture of the seed of this plant. I prescribed it at first on the presumption of the rheumatic character of the disease, and I have had much reason to be satisfied with its effects.

Miss A. M. aged 18, from the first appearance of the menses, regularly suffered the most severe pains at each menstrual period. A moderate discharge usually came on and continued only for a few hours. She was of a full habit, florid complexion, and in other respects in vigorous health. The pulse during each attack was accelerated, quick and tense ; her bowels were usually confined, and the stomach irritable. She was at first bled, and a saline purgative prescribed, with a simple and unirritating diet. The bleeding was repeated in about ten days and another dose of epsom salts administered. Eight days be-

*Memoir on the Treatment of Rheumatism.

fore the expected menstrual period, she began to take the extract of stramonium in quarter grain doses four times daily. This medicine was continued until slight vertigo ensued, which occurred on the third day. The menses appeared in a few days afterwards, but with much less suffering than formerly. During the ensuing interval, she was again bled to the extent of eight ounces and a dose of sulph. magnes. prescribed. Six days before the next menstrual period, she again took the stramonium as before. The menses ensued more copiously than they had ever done before, and with scarcely any suffering. By continuing the use of this narcotic, in the manner mentioned for four menstrual terms, the complaint was entirely subdued. A slight flocculent or membraneous substance was discharged at the third period after the use of this medicine. I could relate other instances which terminated equally favorably under the use of the stramonium. My friend Dr. M'Clintock, has used it with success in a case of this kind.

What would the tincture of colchicum do in this complaint? I have not used it; but its analogous powers with guaiacum and stramonium in rheumatic affections, justify the suspicion that it might be useful.

Mr. Patin, in a late No. of Rev. Medicale, has published some cases from which it would seem that the acetate of ammonia will often speedily suspend the excruciating pains of dysmenorrhœa—but more particularly those which attend carcinoma uteri. I have used it in this latter affection with manifest palliative effects.

ART.—II. *Remarks on vaccination; on its value as a preventative of small pox, and on the causes of its occasional failure.* By JAMES C. FINLEY, M. D.

The great extent to which small pox has prevailed in this city, during the past year, the fatality it has occasioned, and the numerous cases reported to have occurred after vaccination,

have excited a great deal of solicitude upon this subject. The numerous and anxious enquiries made respecting the protective influence of the kind pox, and the causes of its failure, will justify us in inviting the attention of the profession to facts which are so fully within their reach, that ignorance is inexcusable.

We have nothing to offer, either original or novel. The subject has been so fully investigated as to leave scarcely any thing for the ingenuity of speculation ; yet in this as in many other cases, the very simplicity of the subject, and the facility of acquiring information, have led to a very culpable negligence.

We shall first lay down the characteristics of the genuine vaccine disease, and then proceed to enquire into the causes local or constitutional which lead to its failure ; the extent of its protective influence ; its efficacy in this respect compared with small pox ; and lastly into the value of the various precautions which have been proposed for the more effectual security of the system against the attacks of small pox.

1. The genuine vesicle appears on the third or fourth day after vaccination—it is less satisfactory if the inflammation commence earlier. The vesicle when complete is circular, or at least oval, with regular and well defined edges ; cellulose ; of a pearl colour with a depression in the centre of a darker colour, surrounded by an areola with some degree of swelling and hardness ; and containing a fluid clear and transparent, which concretes after the 12th day into a hard scab, semi-transparent and of a mahogany colour. To afford effectual security, the progress of the disease should be uninterrupted by extraneous or constitutional irritation, and the scab should be allowed to remain undisturbed until the 21st day.

The scar should be circular, or at least oval with regular and well defined out lines ; permanently depressed below the level of the surrounding skin ; not larger than a small wafer ; and it is more satisfactory if it be indented and radiated.

To be fully satisfactory, the local disease should be accompanied with slight constitutional symptoms—general fever,

and enlargement of the lymphatic glands ; and the glands are generally more enlarged than from a corresponding degree of local inflammation arising from any other cause. This circumstance is to be particularly attended to ; for there is reason to believe, that the disease is sometimes strictly local, affording no protection to the system, and that many of the cases of subsequent small pox are to be attributed to this fact.

The sources of imperfection are ; 1. Effete or vitiated virus. It has been supposed that the virus gradually loses its specific character, by passing through successive individuals who labored under some constitutional or accidental inaptitude to the disease ; thus rendering necessary an occasional recurrence to the original source for a fresh supply. Later and more extended observation however, has shown that where the imperfection of the vesicle arises from constitutional inaptitude, the virus may still in a healthy individual produce the vaccine disease in its most perfect form, bearing in this respect an analogy to the modified small pox ; the virus of which, although the distinctive characters of the disease are scarcely any longer to be recognized, will reproduce small pox in its most virulent forms. As the vaccine lymph therefore, after having passed through hundreds of individuals, still produces the original disease with all its features, it cannot be admitted that it is liable, in this way, to lose any thing of its original efficacy. Nevertheless, it will not be denied that by successive inocculations in persons laboring under this incompatibility, it may at length lose its specific character ; or that when taken from a vesicle modified by some contagious cutaneous disease, it may carry with it a source of irritation that will produce a similar modification in the person who receives it. The lymph also, we may add, loses its contagious properties by age and exposure ;—the difficulty of communicating the infection is hereby increased, though the protection afforded, when the disease is excited, remains the same.

2. Other sources of imperfection are ; various acute diseases, as fever, visceral inflammation, &c. ; hooping cough ; dentition ; the irritation of the sore by rubbing, or by punc-

turing for the purpose of procuring lymph; and lastly every variety of cutaneous diseases. So generally is the disease modified by the last of these causes, that we have never witnessed a case of successful vaccination where a child, apparently healthy in other respects, was affected with the slightest eruptive disease.

3. To these causes we may perhaps add a scrofulous diathesis when strongly marked, general ill health, and an advanced period of life.

4. There is occasionally an inaptitude for the vaccine disease, with persons in perfect health, which continues through a series of years, and probably in some instances through life. We have met with two instances within the last six months in which, repeated vaccination both from the scab and the vesicle produced no effect, except in one instance to produce after numerous trials, a papulous efflorescence on the second day, which disappeared on the fifth day, without a vesicle. The inaptitude for the disease, however, seldom prevails to this extent, and generally manifests itself in the difficulty of securing the infection; in the slow progress of the vesicle; or in some of those imperfections taken notice of hereafter.

From these different causes the disease may be so modified as to lose more or less of its protective influence. The inflammation may appear too early, and partake from the commencement, of the character of common inflammation; it may be interrupted in its progress; it may run its course too hastily and the scab fall off too soon; the vesicle may want the central depression, the pearl colour, or be filled with pus instead of lymph; the areola may be pale and indistinct, or may appear on the second day without a vesicle, large, irregular, itchy, and of a florid red color, disappearing before the sixth day.

It is frequently a subject of considerable solicitude to know whether this insusceptibility to the vaccine disease, affords evidence of a similar security against the contagion of small pox. To decide this question affirmatively, would require a degree of attention which has never been bestowed upon this point. Dr. Gregory maintains the affirmative, as the result of very

extensive observation. But admitting the fact to be established so far as it applies to those cases of insusceptibility, which do not arise from any obvious disease liable to control the vaccine infection, a great number of cases will still remain, in which the insusceptibility to kine pox arises from diseases too feeble to control the small pox, or which, by co-operating with it, only add to its fatal character. When epidemics, arising from malaria, or atmospheric vicissitudes, prevail, they never fail to impart to the small pox their peculiar type and character. With regard to typhoid epidemics this fact has long been known, and we have seen, during the present summer, in an individual who had been exposed to the remote causes of intermittent fever on the Ohio River, the eruptive fever of smallpox assume distinctly the type of a bilious intermittent.

Not unconnected with this subject is the question, whether the security derived from vaccination diminishes with time. A very general impression of this kind prevails, and we regret to say there is reason to believe, has been encouraged by members of the medical profession. The universal belief, among those whose experience authorises them to express an opinion, is, that when the vaccine vesicle is perfect and uninterrupted in its progress, its protective influence continues through life. If the opinion be correct, that the susceptibility to the vaccine disease and the small pox are modified by the same circumstances, then individuals who, from some constitutional cause, have had the former in a modified and imperfect form, will as the causes which have produced this modification wear away, be liable to have the latter more or less modified, in proportion to the deviation of the vaccine vesicle from its genuine character.

These views are sustained by the fact that variola occurs at every period after vaccination, from a few days or weeks, to many years; and on the other hand, that numerous individuals have exposed themselves to the contagion of small pox with impunity, who derive their protection from vaccination, performed above twenty years ago.

What is the value of vaccination as a preventive of small pox? It can no longer be maintained by the most sanguine ad-

vocates for vaccination, that it is, at all times, an effectual security. The number of cases of small pox occurring after vaccination, first became so numerous as to attract the attention of the public in 1813. The cases so frequently met with were at first accounted for, by supposing the process of vaccination to have been imperfect; and this explanation was, in some degree, confirmed, by the appearance of the scar and the history of the disease. The fact however, is now indubitably established by the concurrent evidence of physicians whose testimony cannot on any account be questioned, that small pox may follow vaccination, when the progress of the latter has been perfectly satisfactory.

When revaccination is resorted to, in most cases it will take no effect. When it does, the disease will sometimes run its usual course without modification; but much more frequently it will assume some one of the various forms which we have enumerated above, among the varieties of imperfect vaccination. Somewhat analogous to this is the progress of small pox after vaccination. In a very few cases, the disease pursues its course without any modification. In other cases though the violence of the disease is undiminished, it runs its course more rapidly. In by far the greater number, the eruptive fever makes its attack with its customary violence, vesicles make their appearance, and disappear about the 5th or 6th day without suppurating; so that the secondary fever, from which is the principal source of danger, never occurs.

The disease however, occasionally proves fatal in this modified form. 1st. In constitutions of great nervous irritability, or under circumstances calculated to produce great visceral congestion, the disease may prove fatal at its very onset. 2. The seeds of some fatal disease may be lurking in the system, ready to be called into fatal activity by any febrile disease. Under these circumstances it is true that small pox is but the exciting cause of the fatal disease, but from the difficulty of drawing the line of distinction between the effects of small pox and those of the superinduced disease, if the latter be at all rapid in its progress, the fatal event is generally

attributed to the former disease. Yet even with these admissions, the number of fatal cases after satisfactory evidence of vaccination is very small. The greater number of cases reported as instances of this kind, are those in which the appearance of the scar, and the history of the vaccination are very unsatisfactory.

During the year 1827, 765 cases of small pox after variola, and after vaccine, are estimated to have occurred in Philadelphia.* Of these the larger number by far occurred in persons who had been previously vaccinated, leading at first view to the impression that the security derived from vaccination, is not so complete, as that from inoculation. But when we reflect that the number of vaccinated persons is far greater than of those who are protected by small pox ; the inference drawn from this fact must be very much qualified. Admitting the fact that vaccination is less effectual as an entire preventative, it on the other hand has a much greater influence in controlling the violence of subsequent small pox. Thus of the cases reported to have occurred after vaccination, ten terminated fatally, but of these two only afforded satisfactory evidence of having passed through the genuine cow pox, and one of these was complicated with pneumonia typhodes—leaving but one death fairly referrible to small pox. Reports made from other sources place the subject in a rather more unfavorable light; but under any view of the case, the chances, in any one individual, against a fatal attack of small pox after genuine vaccination, are so great as to leave little room for individual solicitude. On the other hand, if the proportion of cases of secondary small pox be smaller, the disease is much more violent. Nine fatal cases are reported to have taken place in Philadelphia in 1827. Dr. Brincle, physician to the small pox hospital has at different periods met with 14 cases of secondary small pox, of which two died.

So far as these facts can be relied on, we may conclude that the security derived from small pox is very little greater than that

*See Report of the committee of Phil. Med. Society, appointed to collect facts in relation to the recent occurrence of the small pox.

from the vaccine disease ; and if we take into consideration the comparative violence of even inoculated small pox, the individual danger is increased, while the injury which may result to the community from introducing the infection of so fatal a disease, cannot be calculated. Both diseases, when genuine, may generally be considered as effectually securing the system against the small pox—both are liable, from causes of accidental or constitutional character, to lose their efficacy ; and probably there may be constitutions, in which the predisposition to small pox is so strong that one attack of the disease is insufficient to remove it. In confirmation of this last view, it has been repeatedly stated that secondary small pox most frequently occurs in those persons, whose persons bear the most unequivocal testimony to the violence of the former attack. Would not however, the analogy of the modification produced in the cow pox by violent inflammation, lead us to suppose that the same state of things may occur in variola, and that violent inflammation may so far change the specific character of the latter, as to impair or destroy its protecting influence ?

To what circumstance are we to attribute the increased number of failures, which are reported to have occurred since 1813.

With respect to the opinion, that the cow pox has lost its efficacy by passing through numerous individuals, we have already expressed our views. There is reason to believe that the varioloid has at different periods prevailed very extensively. The connection between the small pox and this disease was unknown until 1813, but an analogous disease, called nurse pox, is described by the older writers, as frequently occurring among the attendants upon those confined with the small pox ; and the chicken pox, with which the varioloid was once confounded, has been frequently mentioned as epidemic at the same time with small pox.

Much of the blame at present thrown upon vaccination, is to be attributed to the indifference of the public, and the carelessness and ignorance of those employed in vaccination. Dr. Jenner was employed many years in studying the subject be-

fore the results of his observations were made known to the world ; and in the mean time, he had ascertained the true characteristics of the disease, with its various spurious forms, with as much precision as we know them at the present time. When the practice was established, it at once attracted a large share of public attention. The business of vaccinating was confided to the Medical profession, and the genuine character of the vesicle was made a subject of the closet investigation. The novelty of the remedy, and the recent experience of the small pox, rendered individuals anxious to avail themselves of its protecting influence, and induced government to make effectual provision for extending its benefits to every grade of society. To the contrast between this and the present state of feeling upon the subject, it is scarcely necessary to refer. Very many physicians scarcely think it necessary to make the characteristics of the vaccine disease a subject of particular investigation, and if they did, the scanty remuneration they receive (in this city at least,) does not compensate them for devoting any attention to the progress of the disease. Many are vaccinated by private persons, and the notions which prevail upon the subject are any thing but correct. We have repeatedly heard persons speak of a high degree of local inflammation, as a certain criterion of successful vaccination; at other times in children laboring under various cutaneous diseases, we have had unhealthy pustules pointed out to us, to shew that the vaccination "had taken finely." Under these circumstances it is not surprising that individuals should be disappointed, and the public confidence impaired in the remedy.

So far as vaccination is concerned, these facts tend to shew that vaccination is entitled to nearly all the credit it originally possessed. If it should appear that with these qualifications failures are still more frequent than formerly, and especially, that cases of secondary small pox are more numerous, something may perhaps be attributed to atmospheric causes. Small pox like other epidemics is disposed at one time to spread more rapidly, and prevail with more fatality than at others ; in other words there is a wide spread constitution of the atmosphere

favorable to the spread of small pox, and perhaps at these times the disease may attack individuals, who, under other circumstances would be protected from its aggression. We do not wish to be considered as perfectly satisfied with this explanation. We offer it merely as a probable key to difficulties, which at present are not well understood.

Of the different plans proposed with the view of providing against the uncertainty of vaccination, we shall mention but two, *inoculation* and *revaccination*.

In objecting to the first of these, we need only remark that it is a mode of protecting individuals, at the expense of the public safety. So nearly impossible is it to keep even an individual so secluded as to avoid communicating the infection, that the practice, under every precaution, must at all times, destroy more lives than it can possibly save. Since the modified small pox, therefore, is as infectious as the disease in its genuine form, it would imply a great perversion of moral feeling, to endanger the whole community for the purpose of guarding individuals against a remote contingency. Even when professional duty requires great personal exposure, a man of spirit would rather incur the consequences of the disease, than set the example for so pernicious a practice. The only circumstances under which it would be justifiable are, when the vaccine infection cannot be communicated; not for individual security, but for the purpose of testing the principle, whether the immunity also extends to the small pox.

Revaccination is a test satisfactory in its nature, and perfectly safe. But since full confidence, on the part of the public, in the security derived from vaccination, is essential to its universal application, the practice should be discountenanced except in doubtful cases. When these occur, vaccination should be repeated until the physician is satisfied that further precaution is unnecessary. It is necessary for the practitioner to be on his guard, lest the difficulty of communicating the infection, where a partial protection exists, should lead him to suspect an entire immunity.

Under the impression that the virus deteriorates from re-

peated vaccination, it has been proposed to renew the infection from the original source. Many difficulties lie in the way of the execution of this proposition. It is difficult to procure the infection from the animal; the cow is subject to other diseases so nearly similar, as to occasion much difficulty in drawing the distinction, and requiring repeated vaccinations to prove the genuineness of the disease; and lastly, the recent disease is more violent without affording greater security.

We presume that we have advanced sufficient to prove that vaccination, as it exists already, is sufficient to obviate all the dangers of the small pox, and if properly attended to, all the inconveniences of the modified disease, and even to extirpate them entirely. So far as the remedy depends upon the medical profession, their duty is obvious. Any remarks upon the policy which expediency may require of the civil authorities, does not comport with the course marked out for the Western Journal; but they may at some future time be made the subject of a communication to the public, through a different channel.

ART.—III. *Remarks on Iodine, read before the first Medical District Society of Ohio.* By LANDON C. RIVES, M. D.

The energetic action of iodine upon the human system, the salutary influence which it has manifested in many cases of the most obstinate morbid affections, and the prospect that the sphere of its utility may yet be enlarged, by bringing under its dominion other diseases which now very generally resist the established modes of treatment, constitute for it a title to professional interest and enquiry, which, few articles of the materia medica, possess at this time in an equal degree.—Numerous and exceedingly interesting experiments have been made with this active agent by physicians both in Europe, and in this country—the results, however, so far as we know, have by no person been collected or embodied. The attempt will constitute the scope and design of the present paper, and if in the pro-

gress of our research, we should be enabled to make a fair estimate of its value, or to deduce any practical precept which should guide us in its administration, or direct us in our future experiments with it, we shall be compensated for the labour incident to the undertaking.

The credit of introducing iodine into the practice of medicine is due to Mons. Coindet of Geneva. In the year 1820 he announced it as a valuable remedy in Goitre. What were the considerations which influenced him to experiment with the article, we have no means of determining; but his success was such as to draw to it, immediately, the notice of the profession. In his first trials, the tincture of iodine only was used, but having observed occasionally certain unpleasant symptoms to arise which he attributed (erroneously, we think) to its internal administration, frictions with the ointment of hydriodate of potash were substituted by him in his subsequent practice, and as he avers with the same decided influence upon the disease, and without any of those untoward symptoms which accompanied its internal use. Of twenty three cases which he reports to have managed by inunctions alone, twelve were entirely cured and the residue were all benefitted. The favourable report of Coindet is fully sustained by the testimony of Coster, Breschet, Gunther, De Carro and a host of other experimentalists on the continent of Europe. By the first named physician, we are told that of "nearly 100 persons whose cases he had collected, more than two thirds were completely cured by it," and we do not believe that the average proportion of cures would be essentially varied, (we are sure, it would not be diminished) if all the cases which had ever been treated by it, could be collected. The experience of the physicians of Great Britain and America, which has accumulated rapidly in a few years past, tends to corroborate the statements from the continent. We are therefore, after a careful comparison of the reports of the profession generally—prepared to accord to iodine the merit of being the most efficient remedy in Goitre, with which we are acquainted. We would be far however, from encouraging an expectation of uniform success. Our experi-

ence reprobates the idea of a specific, and the very name is abhorrent, in our view, to all the principles of a correct medical philosophy. In many instances we are satisfied that iodine has failed to produce any diminution in the volume of goitrous tumours, though persevered in, and given in as large doses as the stomach and strength of the patient would allow. These instances however, are comparatively few, and they would probably be still farther reduced in number, if the medicine were judiciously aided by other means. If the tumour be inflamed, emollient fomentations and the local detraction of blood by leeches, are valuable subsidiary agents, and if it be hard and indolent, electricity should be super-added. M. Coster's method of using this latter remedy, being peculiar, deserves to be stated. It is known that the positive pole of a galvanic pile exercises an attractive action on iodine. With this fact before him, M. Coster conceived the idea that "by making use of frictions with pure iodine on one side of the tumour," and alternating it at each application and "applying the pole on the opposite side, the absorption would be more speedy, and the effects of the iodine on the tumour more sensible." We are not prepared, from the single case which he presents in illustration of his suggestion, to attach to it any great importance. It nevertheless deserves to be remembered. Instances of diseases yielding to the conjoint action of remedies, which, when separately employed had been unsuccessful, are by no means unusual in the practice of medicine ; and this case, in our opinion, only presents another example of the fact. The iodine and electricity awakened the activity of the absorbents which, either unaided by the other, had been too feeble to accomplish.

In pursuing the history of our medicine, we find that the success which attended its employment in Goitre, very soon suggested experiments with it in scrophula, and although from a comparison of all the medical testimony we have been enabled to collect, it does not appear to exert so decided an influence in this as in the former disease, there is abundant and undoubted evidence to satisfy us that it deserves to rank among the most important of our anti-strumatic remedies. To

this point we have the testimony of Kolley, Gardner, Gocden, Bardsley and others. But let us not imagine that this or any other medicine is endowed with properties to meet all the various indications which are presented to us in the progress of this complex and pervading disorder. From a disposition to hunt after specifics we are prone to overlook the conditions of the system which controul or modify the action of medicinal agents, and to expect from one, what can only be achieved by the skilful management of many medicines. Much difficulty has attended every attempt to illustrate the origin, nature, and treatment of scrophula, and the whole subject is even now involved in obscurity and uncertainty. It is doubtless, an hereditary disease, though it is also often acquired. It is associated with a prominent developement and irritability of the lymphatic system, and by most pathologists, is supposed to have its primary seat in this system. We doubt however very much the correctness of this view of the disease. Accustomed in all of our pathological speculations to give to the digestive organs, an important agency in the production and propagation of diseased action, we have found strong reason in our limited experience with this, to assign to it the same location. We have been led to adopt this view of its pathology, from a consideration of its symptoms, its causes and its treatment.

Among the earliest phenomena of the disease, if indeed they be not the very first, are variable or deficient appetite, nausea, irregular bowels, often constipated, flatulence and precordial oppression. So prominent are these symptoms, that they are universally present in every case of scrophula, and are recogniz d long anterior to the *developement* of the disease, as intimately associated with the strumous diathesis. If we pass from the symptoms to the causes of scrophula, we shall find that the latter equally declare its origin to be in a disordered state of the chylopoietic viscera. Had we time to engage in a separate analysis of each, we are persuaded, that it would be an easy task to shew that they all might be resolved into such as impair, directly or indirectly the powers of the stomach. We have only to designate the most operative of them, to

make it manifest that such is their mode of action. Unwholesome aliment, a damp and close atmosphere, intestinal worms, the abuse of opium, of heat and of cold, and the want of cleanliness and of exercise, are the most productive causes of scrophula. Are they not also, those which are best calculated to weaken the powers of digestion ?

Our position is moreover sustained by a view of the prophylactic, and curative treatment of scrophula. The latest and most authoritative writer, on the disease declares that "*dietetics* is omnipotent in its prevention," and again that "*dietetics* and physical education are the only means capable of eradicating the scrophulous taint." For these reasons we cannot assent to that theory of this disease, which radicates it in the lymphatic system. We have already admitted, that there is connected with the strumous diathesis, a peculiar irritability of the lymphatic system, which renders it more susceptible to the morbific influence of irritants. But this condition being congenital and frequently compatible with the most perfect health, is, we conceive distinct from disease itself. We take leave of this digression, by repeating our conviction that the primordial derangement in scrophula, exists in the organs subservient to the processes of digestion, assimilation and nutrition; that commencing in the stomach, it is extended to the bowels, to the lacteals, to the mesenteric glands, and finally to the lymphatics which is the seat of its most obvious and prominent symptoms.

Scrophula is marked by two very distinct stages which exact a modification of remedies. In the first or occult, the treatment resolves itself into one of a tonic and corroborant character. Occasional purging, tonics, exercise, regimen and bathing, constitute the sum of what should here be attempted—but when the disorder is fully developed, it calls for a much more diversified treatment. Purging is then required, not only to remove alimentary accumulations and vicious secretions, but to overcome the inflammatory diathesis which frequently accompanies this stage of the disorder. With the same view of reducing the action of the blood vessels, it is often necessary

to resort to the lancet, and the anti-phlogistic treatment in all its details. These means judiciously combined with tonics, narcotics and local remedies will frequently accomplish cures, even in this stage ; but in protracted cases, and more especially in such as are accompanied by an affection of the skin and eyes, it has been usual to resort to mercury. Exactly under such circumstances, I presume, iodine is most useful and should be preferred to mercury. It is generally conceded that a decided mercurial impression is mischievous in this disorder, by exciting irritation and debility, and it is also well ascertained that mercury does not act with energy upon the absorbents until this point is attained. We appeal for the truth of this remark, to its operation in ascites. Repeatedly have we seen the ordinary combination of squills and calomel prove inert, until its effects were displayed on the salivary glands, when immediately absorption would commence and go on rapidly. Now in iodine, we have an agent which will act with as much energy upon the absorbent system, whilst upon the stomach it displays a tonic action , thus fulfiling two most important indications in scrophula. Iodine is perhaps less irritating also, and hence may be used in forms of the disorder, in which mercury is absolutely mischievous. In tuberculous lungs, the best authorities concur in reprobating the use of mercury, the effect of every preparation of this mineral, being invariably, to excite the tubercles into action, and to hasten their suppuration. Such is not, however, the action of iodine. Dr. Berton's experiments with the vapour of iodine, in incipient consumption, would lead us, on the contrary, to expect benefit from it. In two, of the three cases he reports, the cough and expectoration were greatly relieved, and the appetite improved. These results with the later testimony of Dr. Baron, who is sanguine that he has succeeded in dispersing tubercles of the lungs by this remedy" and the negative testimony of Mons. Lugol, who declares that he has never known it to prove injurious to pulmonary tubercles or hæmoptysis, should incite us to further trials with it. But in this deplorable malady, I confess, that I indulge very little expectation of benefit from iodine or any

other medicinal agent. Its unhappy subject will find his best hope of a prolonged existence in a temperate and abstemious regimen, in a mild and uniform climate, in moderate exercise and in an avoidance of all those causes which are calculated to produce vascular excitement. When once disorganization has commenced, all the efforts of art will, I apprehend, prove unavailing to arrest it, though as we are taught by Laennec, nature may sometimes interpose a shield to save the sufferer.

As a remedy in the local strumous affections, we are persuaded, there is none which deserves to rank with iodine. Its success in the treatment of white swellings is attested by a large number of cases, scattered through the periodical Journals of medicine within the last few years. Without entering into a detailed or elaborate statement of the experience of the profession generally, (for there is a striking coincidence in the results obtained by all experimentalists) we shall content ourselves with presenting that of Mons. Bayle, as indicating sufficiently the value of our medicine and the description of cases in which it promises benefit. In the Revue Medicale for March 1829, this gentleman reports twenty five cases of white tumours which were treated with iodine, some by himself, the rest by other physicians. The patients possessed lymphatic constitutions and had symptoms of scrophula. With the exception of one, who was in articulo mortis when the treatment commenced, they all improved remarkably in general health. Of the twenty-five, twenty-four were affected with tumours of the joints. In eight the tumour was situated in the knee, in six it occupied the foot, in three the hip, in two the elbow, and in the remaining five, the disease involved more than one articulation, and was accompanied with other symptoms of scrophula as ophthalmia, albugo, impetigenous ulcerations, &c. &c. They were all treated with iodine. To all, the tincture was administered in various doses, and in eight cases the ointment of iodine was used at the same time. Results.—Fifteen were cured, five were benefitted, four not improved. The cases cured, were those, in which the tumour was neither volu-

minous, nor open in many places, nor accompanied with atrophy of the limb, or general emaciation.

In behalf of our medicine in strumous ophthalmia, we might collect a very large amount of evidence, but to the readers of the Western Journal, we are persuaded, we can name no higher authority, than its distinguished senior editor whose ample experience, we are permitted to say, fully sustains the reports which have been made by others in favour of iodine in this disease. Our countryman, Dr. Cartwright of Natchez, has extended its employment to chronic ophthalmia accompanied with a turgid state of the vessels of the tunica conjunctiva lining the eye lids, to ophthalmia associated with what he calls the "*paludal diathesis*," (a term sufficiently indicative of the constitution he would designate) to iritis, and to other forms of ophthalmic disease. Whether in these it deserves any large share of consideration, remains to be ascertained by the observations and research of future enquirers. At present its value in these cases, rests almost exclusively upon his solitary experience.

As an emmenagogue, iodine has been used with a success which entitles it to the character of a valuable auxiliary to our resources in the treatment of amenorrhœa. The cases to which it has appeared to be best adapted, are such as are usually accompanied with vicarious hœmorrhage, such as are associated with enlargements of the spleen or liver, and are engrafted upon the paludal or strumous diathesis.

Leucorrhœa is another female complaint which has been made to succumb to the curative powers of our medicine. The experiments of Gimilbe and of Gœden in Europe would teach us that it is more especially suited to the "Leucorrhœa of habit" and to such cases as are dependent upon chronic irritation, but the trials of American physicians demonstrate that it is equally suited to all cases occurring in persons of a leucophlegmatic habit.

In chorea and paralysis iodine is highly commended by Manson, but his testimony is in some degree countervailed by that of Bardsley, who declares that he has never seen any benefit

result from it in the latter disease, nor in the former, except in two cases. In the course of the experiments of the first physician, it occurred to him, to see fistula lachrymalis, combined with paralysis, removed by our medicine. A similar combination of disease presented him an opportunity of witnessing the cure of deafness by the same agent, and his further trials with it, have furnished eight other cases, as monuments of its utility in this disorder. It is probable that the disease in all these instances was occasioned by tumours pressing upon the membranous portion of the eustachian tube.

Enlargements of the liver and of the spleen have yielded to iodine, and upon the authority of Dr. Milligan of the Royal Universal Infirmary for children in London, it is stated that in one case of enlarged spleen it proved successful, after all the ordinary preparations of mercury had been unavailingly tried. Associated with, or consequential to this condition of the liver, and of the spleen too, it is not unusual to meet with cases of ascites. In this form of dropsy, thus complicated, our medicine has proved powerfully diuretic and efficacious in the hands of Bardsley and of Baron. In all the instances which have been detailed by the former physician, the patient laboured under great debility and a feeble pulse. In the reduction of indurated and enlarged testicle, iodine has been successfully employed by Dr. Deselleic of Paris, and by Drs. Cartwright, Thompson and M'Pheters of this country. It is our duty, however, to state that the same fortunate results have not been obtained by others. Our friend, Dr. Drake, informs us that he employed it without any benefit whatever, in a case of enlarged and irritable epidydymis, associated with dyspeptic symptoms. We would also add, that he has not, in the course of very extensive experiments with the article, observed it to diminish the size of the healthy testicle, as it has been reported to do.

While upon this branch of our subject (viz. glandular and visceral enlargements) we cannot refrain from calling the attention of the reader to a most interesting, though solitary case of enlarged uterus, detailed by Dr. Thitford of Ireland, in

the transactions of the King and Queen's college of physicians. The patient had suffered very much in her general health for years. The whole substance of the uterus was discovered to be enormously distended and indurated, possessing the hardness of bone. She was subjected to treatment by mercury, conium and hyosciamus for 36 days, with some little improvement in her general symptoms, but without any effect whatever, upon the tumour. At the end of this time the tincture of iodine was substituted, and the tumour was quickly absorbed. Inflammation of this viscus, succeeding parturition, has been also cured in two instances, by Dr. Guerard, with iodine.

Acting upon the supposition, that every morbid growth of the body, wherever situated, presented a fair case for the trial of iodine, Dr. Gendrin has employed the ointment of the hydriodate of potash *successfully*, to promote the absorption of arthritic concretions; and by a legitimate process of reasoning, which presumed that whatever acted favourably upon these would likewise benefit the disease itself, he has introduced it into the treatment of the paroxysms of Gout. His practice has already furnished numerous cases of its success; (26 we have seen recited) but as far as we are informed, he has not been followed by any other experimentalist in this disease. Lately, Mr. Maury, of the hospital at St. Louis, in Paris, has succeeded with our medicine in curing two cases of rheumatism which had resisted all the usual remedies. It promptly dispersed the tumefaction of the joints. It has been used also in chronic ulcerations, in diseased heart, in cephalalgia, in obesity and in fungus hæmatodes; but its value in all of these diseases is problematical, and with the exception of the first, rests upon a single case of success, which is, moreover, in the last countervailed by an instance of failure.

We have thus enumerated succinctly, and without regard to nosological arrangement, the principal diseases in which iodine has been used. Could we have designated also the circumstances of the patient, and the symptoms of each case, in which it has been found useful, we should have supplied a most important desideratum in regard to it, and have given additional

interest and value to our summary. But neither our own experience nor the meager and scanty reports to which we have had access enable us to engage in the attempt, with any prospect of advantage. For the present we must content ourselves with general facts, leaving it to the tact and sagacity of each individual practitioner to make the application for himself. More extensive experiments and more careful observation, are yet necessary to establish the sensible effects of our medicine upon the system and to connect them with its therapeutic agency. Within the range of its salutary action iodine has not been observed to produce any physiological changes in the system commensurate with its great and multifarious remedial powers. An increase of appetite and of the pulse, an unusual giddiness and a peculiar itching, are the most common effects of the medicine, but we have superadded to these by some foreign physicians, a direful catalogue of appalling symptoms, such as great acceleration of the pulse, heat and irritation of the fauces, pain in the orbits of the eyes with derangement of vision, pain of the internal ear and soreness of the gums with occasional salivation, head-ache, restlessness, watchfulness, atrophy of the mammæ, and of the testicle, voracious appetite, emaciation, pains in the chest, stomach and bowels, with vomiting and diarrhœa, tremors, palpitations of the heart, convulsions, cramps or palsy of the lower extremities and finally anorexia and death. This pompous array of the formidable effects of iodine produced an interdiction of its use by the governments of some of the Swiss Cantons, and excited a professional dread of it, which is scarcely yet removed by the multiplied proofs of its safety. It has hence been forced to make its way through much opposition and indiscriminate abuse. The experience of Coindet, DeCarro, Breschet, Formey, Coster, Kolley, Erlinger and others on the continent of Europe, who have employed it extensively without any bad effect whatever, sustained as it is by the universal experience of British and American practitioners, should be considered as decisive of the question of its safety. Like mercury and arsenic, we believe, it is capable of exerting a poisonous influence

upon the system, but it can be no more necessary to induce this influence, in order to attain its salutary action, than it would be to produce an exfoliation and destruction of the bones or a mercurial eczema in order to obtain the good effects of mercury in any of the diseases in which we habitually employ it. A prudent and skilful physician will always watch the effects of all potent medicines and continue, suspend or renew their use accordingly as the system may be impressed by them, and he will be thus often rewarded with a success which the timid, routine practitioner may in vain aspire to.

The contra-indications of our medicine, like its deleterious properties have doubtless been exaggerated, and unnecessarily multiplied. The mischievous effects which have been said to result from its employment, have inspired a professional timidity which is unfavourable to correct observations; and many of the restrictions which have been imposed upon its use, we believe, are founded upon hypothetical grounds, rather than upon experience. It is said to produce unpleasant effects upon nervous and irritable habits and hence should be used with great caution in persons distinguished by this temperament. It nevertheless not unfrequently displays its *salutary action more readily in the old and infirm.* An unhealthy state of the digestive organs has been also supposed to furnish a contra-indication to its use, so have a disposition to phthisis pulmonalis, diarrhœa, local affections of the stomach and liver; but we have seen that *many of these diseases* have been occasionally successfully treated by it, and *of course* they can now no longer be regarded as pathological conditions forbidding its employment. Its interdiction, in phthisical patients, is based most probably upon the supposition, long entertained, of its identity with the active principle of burnt sponge, which we are told by Hufeland is mischievous in such subjects. The chemical investigations of Heusmans of France, have demonstrated however, that it is not contained in burnt sponge. But if we wanted further evidence of the partial observation in which this idea originated, we need only refer to the extensive clinical expe-

rience of Lugol, of Berton and of Baron. The existence of inflammatory or congestive disorders, a full, plethoric habit and an accumulation of sordes in the alimentary canal are the only conditions of the system which, *in our opinion*, indisputably contra-indicate iodine, and they should always be removed by their appropriate remedies previously to its use.

ART. IV.—*Case of Conical Cornea, Communicated by* JAMES M. STAUGHTON, M. D., Late Professor of Surgery in the Medical Department of the Columbian College, now of Cincinnati.

In the summer of 1828, a young woman of 19 years of age, called at my office in Washington city, for advice. By the manner in which she groped her way into the room, I perceived that she was nearly blind. She was from the country, but was then on a visit to her sister at the Navy Yard. She complained of a dimness of vision in both eyes, which had been gradually increasing for two years. On looking at her eyes, which at first glance appeared natural, I recognised a case of conical cornea. I was in a moment struck with the truth of Travers' beautiful description of the disease, which he tells us, causes the cornea "to exhibit a degree of tenuity and brilliancy which gives it the appearance of a pellucid fluid like a dew drop suspended."

The alteration in the shape of the cornea was great and consequently the vision very imperfect. The patient could tell on which side of the room the windows were situated, but, so refracted were the rays of light that she could distinguish neither their form nor number. She was unable to walk alone in the streets, and it was by her sisters' arm and guidance that she reached my office. Nor was her sight much more distinct when the axis of vision was shortened. The most close approximation of the object to the eye, assisted her vision but little. I had in my possession a lens of unusual concavity, made

for an optical instrument ; this however she found to be of no assistance, as indeed usually happens.*

She complained of a continual sensation of fulness in the eye balls, amounting at times to acute pain. There was not, so far as the most attentive scrutiny could detect, the slightest vestige of inflammation in any of the tissues of the eye.

This was the first case of conical cornea, that had ever presented itself to my observation. From the various authors that had touched on the subject, I understood it to be an absorption of the interlamellar texture of the cornea, by which it looses its natural tonic resistance to the contents of the globe. I was forcibly struck with the great extension that the cornea had undergone, for the cavity of the aqueous humour was capable of containing more than double the usual quantity of fluid.

I am not disposed to deny the power of this interlamellar absorption to produce the disease—though I believe we have no post mortem examinations to prove it. On the contrary I think it would be difficult to account for the conoidal figure assumed, without supposing that the cornea afforded less resistance at the centre than at the edges. It appeared to me easy to account for the symptoms which were presented, by supposing the vessels which supply the aqueous humour to be in a state of increased activity. The gradual manner in which the vari-

*The most extreme cases of near sightedness resemble the disease in question, in the projection, though not in the conoidal shape of the cornea, and many of the most prominent symptoms are very similar. A remarkable case of this kind occurred in a Baptist Clergyman, now no more, well known for his eccentricities, and much respected for his unaffected piety and benevolence, a resident of New-Jersey. He was so near sighted as to be unable to walk without guidance. He could not read without approaching the book within an inch of his eye and even then could not see a letter unless he were in the open air, and the sun shining strongly on the page. Notwithstanding these difficulties, he mastered the languages. In the Greek he was truly learned, and being a man of great natural shrewdness, some of his philological researches were deemed truly valuable. His ingenious friend the late Rev. Dr. Allison, ground concave glasses for his use in reading, but so great was the requisite concavity, that the size of the letters was diminished so as to be scarcely perceptible.

Of course if lenses are used in the disease before us, they must be ground into a hollow conoidal shape, and not concave.

ous tissues extend before a slowly accumulating secretion, leaves no difficulty in accounting for the change of shape which occurs. Of the extensibility of the cornea, Burgman gives a frightful instance in a man who was hanged, whose cornea were so prodigiously distended that they reached down to the mouth like horns. HALLER. DISPUTAT. CHIRURG. VOL. II.

That a continued pressure was kept up in the eyes, the painful sensations of the patient, most abundantly proved. If the alteration in the shape were to be attributed to the pressure of the contents of the globe on the attenuated cornea, then ought all those contents in a case of great extension, like the present to be carried greatly forward—then ought the iris to present a convexity on its anterior surface—then ought the cornea to be soft and yielding to the touch. Now, in the case before us, I could find no convexity of the iris, and when the cornea was felt beneath the lid, which it caused to project very much, I found it firm and resisting. From this view of the subject, I came to the conclusion, that the disease was owing to an increased accumulation of the aqueous humour, and I determined to try if I could not reduce its quantity by some of the means within our reach. How far this view was correct, the result of the case will prove.

One word more. Mr. Wardrop remarks, that in those cases which he had examined, there has always been a small portion of the cornea where the surface was irregular, having the appearance which is observed, where a thin membrane fills up a part of the cornea which has been previously destroyed by ulceration. Hence he concludes that conical cornea is always the result of a structural or organic change. In one case of Mr. W.'s there was perceived by the patient a multiplication of images, and there must have been inequalities on the surface of the cornea, not, perhaps, unlike the various facets which the lapidary gives to the crystal, but of much greater irregularity. This case his friend, the celebrated Dr. Brewster of Edinburgh, examined with great attention. The Doctor was led to the conclusion from this and several other similar cases, that an irregularity of the corneal surface must be present in

all possible cases of conical cornea : and he proposed to relieve it by glasses ground so as to correct the irregular refraction.

Far be it from me to suppose that the irregular surface does not at times accompany conical cornea. Though I must be excused from believing that Dr. Brewster, or any other optician could grind glasses to suit the varieties of irregularly refracting cornea. This opinion, however, I think explains very satisfactorily the manner in which, what Mr. Travers calls "*the tubular spectacle frame with a pupillar aperture*" renders the vision of the patient in certain cases, more distinct than any other contrivance ; for then the rays of light can be made to fall on a small portion of the smooth and uninjured cornea, and thus undergo a regular, though excessive refraction, while the rays are broken up and dispersed when they fall on the uneven surface of the whole cornea.

Mine however, was not a case of this kind. The most minute examination after Dr. Brewsters' most approved method did not shew any irregularity on the surface of the cornea. Nor did a pin hole in a card (which might perhaps answer as well as the "*tubular spectacle frame, &c.*") render the vision one whit more distinct.

The known properties of the iodine in promoting absorption presented themselves to my mind as offering the best means to diminish gradually the quantity of the aqueous humour, and to produce a corresponding alteration in the shape of the cornea. I directed the patient to rub the surface of the lids with a small portion of the ointment of iodine, every night and morning.

The first application of the ointment generally vesicates. It did so in this case. My patient, however, courageously continued its employment, and in four days she had so far recovered her sight as to be able to walk alone from the Navy Yard to my dwelling, a distance of upwards of two miles. The convexity of the cornea I found much diminished, and its transparency in no way injured. She was in the highest spirits at so wonderful an improvement, and continued to attend with the greatest diligence to my directions. In less than three weeks,

she was able to read and to sew, from which she had been debarred for many months. She was anxious to return to the country. I directed her to continue in the moderate use of the iodine.

From that period I never heard of her till April 1830, when she came into the City to procure another box of the ointment. Her vision had remained distinct, and for upwards of a year she had not used the iodine. She had lately taken a severe cold and feared her old disease was returning. I detained her in the City, till she had used a portion of the iodine, and till she was perfectly satisfied that the disease was absolutely under the controul of the remedy.

Conical cornea is a rare disease. Many surgeons of great practice have never seen a case. I know of no remedy that has been so successfully used in the disease, as the iodine in the case related. Should a more extended trial prove its efficacy, I shall feel great pleasure in having thus communicated it to my professional brethren.

ART.—V. *A case of severe Nervous Irritation, from the sting of the insect called a Yellow Jacket* [*Vespa Crabro*] *in a letter from* Dr. LITTELL to Dr. DRAKE.

DEAR SIR,—

I am aware that cases of extraordinary nature, and of rare occurrence, are generally of little practical utility, but the following one, which came under my notice a few days since, seems to me sufficiently interesting to merit preservation; should it also appear so to you, I would be gratified by its insertion in your journal.

Charles Jacoby, a German, about 40 years of age, of vigorous health and robust constitution, while ploughing on the sixth of August, was stung about the middle of the fore arm by a *yellow jacket*, [Vespa Crabro] the pain was not greater than is usual in such cases, but was almost immediately followed

by a slight chill, succeeded by a flash of heat ; after the lapse of about ten minutes, an *aura*, which he described as compounded of heat and a sharp prickling sensation, was felt in the wound, and gradually diffused itself over the whole body ; after this had continued a short time, vision became indistinct, and soon failed altogether ; he called to his companion, who was about a hundred yards distant, and conversed with him two or three minutes after his arrival, when he suddenly fell from his seat in a state of total insensibility, in which he continued nearly two hours ; his limbs were rigidly extended, his mouth was firmly clasped and slightly covered with foam ; there seemed to be a complete cessation of the functions of the heart and lungs, for those around him stated that during the space of half an hour, neither respiration nor pulsation was perceptible, his eyes were fixed and ghastly, face livid, almost black ; his fingers also, assumed a bluish hue, and his extremities became quite cold. In this condition he continued about thirty minutes without any evident change. At the expiration of this time, some respiratory movements were perceptible, feeble and irregular at first, but gradually becoming stronger, with a corresponding improvement in the pulse, which was also feeble and intermitting on its reappearance ; the livid colour forsook his lips and the amendment though gradual, was progressive, till I saw him, about two hours from the commencement of the symptoms. I spake to him, shortly after I entered the house, and he replied correctly, complaining of pain over his whole body ; and a little while afterwards, while I was revolving in my mind the nature of his malady, (for at this time I was not aware that he had been stung) he opened his eyes, sat up in bed, and seemed to be restored to the full possession of his faculties ; for he now recognized those around him. He was utterly unconscious of all that had transpired since the accession of the blindness, not even remembering the short conversation he had with his friend ; whose approach towards him after he had been called, was the last thing which he could recollect. Though still somewhat dull and drowsy, and a little hoarse, he conversed freely, pointed out the spot where

he had been stung, &c. His respiration was now easy and natural, pulse weak but regular, and warmth was gradually diffusing itself over the extremities, which however were still cool; the pupils of his eyes were unaffected, he complained of severe pain in the head and of chilliness, for which I directed a warm pedilurium with salt, and hot brandy toddy, the only appropriate remedies at hand—these measures afforded him some relief, but, at the time I write, he states that he still feels the effects of his illness. Mr. Jacoby informs me that he had a similar attack about four years ago, and that, to the best of his recollection, he was stung by a *Yellow Jacket* on that occasion also, though his symptoms were not then referred to that cause. He has been frequently stung by bees, wasps, &c. without suffering any unusual consequence.

Very respectfully,
S. LITTELL, jr.

ART.—VI. *A case of rupture of the bladder terminating fatally on the 4th day.* By JOHN E. BUSH, M. D., of Cincinnati.

I was sent for, on the 21st June to visit Mr. H. who was represented to have injured himself very seriously by a fall a short time before. As I was absent when the messenger arrived, my pupil, Mr. Andrews, called to see the patient. He found him lying on his face upon the floor, in very great pain, and absolutely refusing to be moved; and was informed that he was intemperate in his habits; and that he had returned home on the evening before somewhat intoxicated. On getting up in the morning, about 10 o'clock, he had fallen across the bed post, and complained immediately of most excruciating pain about the abdomen. As he positively refused to submit to any remedial measures, Mr. A. left him; and having been again sent for, I saw him on the next morning. I found him suffering great pain throughout the whole abdominal region, his pulse quick, frequent, tense and rather strong, the abdomen

swelled and tense—a constant inclination to void his urine without the power of doing it—with a sensation which he expressed by saying "he felt as if his bladder would burst". His bowels had not been moved since he received the injury.

By introducing the catheter about half a pint of urine was drawn off; the loss of thirty oz. of blood produced a disposition to syncope and a complete reduction of the pulse. Twenty grains calomel were given to be followed by castor oil and spts. of turpentine each half oz. every hour, until evacuations were produced. Fomentations to the abdomen.

Evening. No relief from the pain; no alvine evacuations; pulse increased in frequency, but soft and weak; skin of the natural temperature; a small quantity of urine was discharged by the catheter; bleeding was attempted but the pulse gave way under the loss of six oz. Fomentations continued during the night.

23d. Tension and soreness of the abdomen increased. Spasms of the abdominal muscles with excruciating pain, shooting from the scrobiculus cordis to the loins, produced by the slightest motion. Tongue slightly furred. Catheter again introduced—a blister applied to the abdomen, and infusion of senna with epsom salts directed during the day, their operation to be assisted by enemata.

Evening, slight alvine evacuations healthy in their appearance; reported to have had a free voluntary discharge of urine. No alleviation of the symptoms, pulse 150, not contracted, but without tension or strength.

Hitherto we had been led to suspect a viscera læsion, and our suspicions were early directed to the bladder, but the voluntary discharge of urine now led us to think differently. At the recommendation of Dr. Finley, who met me in consultation, he was again bled. The loss of eight oz. reduced the pulse and relaxed the system very much. The pain was somewhat alleviated, and after a large dose of denarcotised laudanum, he passed the night in comparative comfort. In addition to the laudanum were given 20 grs. calomel.

24th. Pain somewhat relieved when perfectly at rest. Calomel and opium directed to be taken during the day and the bowels evacuated by enemata.

Evening, much worse ; pulse nearly imperceptible, extremities cold, no pain except on pressure, slightly delirious; during the night these unfavorable symptoms increased, and he died about 5 o'clock on the next morning. To the last he retained a considerable degree of muscular strength, and within 5 minutes of his death, he arose from his bed, walked across the room and poured out a tumbler of water.

Appearances on dissection. On opening the abdomen a large quantity of transparent fluid presented itself (perhaps a gallon and a half) very offensive, and supposed by some present to have a urinous smell ; the bladder was ruptured at the fundus, and closely contracted on the pubes ; the intestines covered with coagulable lymph, agglutinated to each other and their peritoneal coat in a state of high inflammation ;—the mucous surface not altered from the usual appearance ; the omentum dark colored, but not gangrenous.

The reader will no doubt be struck with the fact, that the constitutional symptoms in this case were rather those of irritation, than inflammation. Although the local symptoms urgently called for depletion, the pulse and the state of the surface, neither manifested the usual symptoms of inflammatory action, not of that depression of the vital powers, which accompanies violent visceral inflammation ; bearing in this respect a close analogy to the cases of rupture of the duodenum, and of the pylorus, reported by Dr. Drake in former numbers of this journal.

The facility, with which the bladder was ruptured is also worthy of notice, and can be accounted for, only by the supposition of great distension, and of that passive state of its contracting fibres which follows as the consequence of a fit of intoxication.

ART.—VII. *History of a case of Exophthalmos or Protruded Eye ball.* By DANIEL DRAKE, M. D.

As the standard works on the Surgery of the Eye, have but a limited circulation in the Western States, I shall preface the following history with a few

PRACTICAL OBSERVATIONS.

Several causes may give rise to a protrusion, more or less considerable, of the globe of the eye, the organ remaining healthy and of its natural size.

1. Accumulations of adipose matter.
2. Collections of entravasated blood, from a punctured wound extending deeply into the socket, or from blows.
3. Abscesses, from purulent inflammation in the orbit, behind the eye ball.
4. Induration and thickening of the cellular substance from inflammation.
5. Hydatids.
6. Aneurism of the ophthalmic artery; and aneurism by anastomosis.
7. Exostoses from the bones of the socket.
8. Enlargements or hydatids of the lachrymal gland.
9. Scirrhous, cartilaginous or fungous tumours.
10. Encysted tumours, seated in the adipose substance of the orbit.

On each of these affections, I shall make a few diagnostic and therapeutic remarks.

1. When the protrusion is caused by accumulations of adipose matter, the axis of the eye remains unchanged, and vision unimpaired; the patient experiences little or no pain, and the eye is without inflammation, until its pressure against the lids becomes such as to excite irritation. The disease often affects one eye only.

If the patient be of a full habit and inclined to obesity, general blood letting, purging and a vegetable diet, will be

necessary. Mr. Ware (Posthumous Observations p. 295,) observes :

"The repeated application of leeches, on the temple and forehead, has been found of great use in subduing this morbid tendency. In one case, that came under my own care, the projection was speedily diminished by opening the temporal artery ; and, after the hæmorrhage had ceased, by converting the orifice into an issue, the discharge from which became soon very considerable. In another case, in which the protrusion occasioned great pain, and nearly destroyed vision, a perfect cure was accomplished by the application of a large caustic behind the ear. The discharge which it occasioned, when the eschar separated, was profuse ; and it was kept up nearly a month, by the insertion of a dozen peas daily."

Dr. Delafield thinks this malady in general of a scrophulous nature.

2. When displacement of the eye ball follows, speedily on a wound carried into the socket, there can be no mistake as to the diagnosis. The deep seated parts become engorged by capillary congestion. and extravasation into the cellular tissue and the cavity of the wound.

A temporary exophthalmos is the necessary consequence and will be made to disappear, by promoting the escape of coagula from the wound and causing an abatement of the inflammation, by appropriate antiphlogistic measures.

3. Phlegmonic inflammation behind the eye ball, may originate from external causes, or be, in the language of the profession, spontaneous, like the abscesses which form in other parts of the adipose membrane. It may be either acute or chronic. Mr. Ware remarks :

"If the suppuration be quick in its progress, and be not situated deep, the fluctuation of the matter may be easily felt, and the propriety of discharging it be determined on at once ; but if, as I have occasionally found, the suppuration be slow, and the matter lie considerably below the surface, the eye will be protruded before any fluctuation can be discovered ; and the existence of the matter will only be learned by paying attention to the accompanying symptoms, such as a quick pulse, white tongue, shiverings, &c." 292.

In his Operative Surgery of the Eye, Mr. Guthrie, in reference to this affection, observes—

"Sometimes, when the swelling is the result of acute inflammation, the abscess is formed with great pain; and when measures are not taken early for the discharge of the matter, its undue retention may give rise to very serious consequences; but it finds its way in general to the surface of one or other of the lids, and its evacuation, either spontaneously or artificially, leads to a subsidence of the symptoms, as well as a return of the eyeball to its natural situation, if it should have been protruded from the orbit by the size of the tumour. The pain, in these cases, is deep-seated and distressing, always accompanied by fever, and occasions considerable alarm from the swelling of the parts and the commencing protrusion of the eyeball. The upper lid swells, becomes red, œdematous, and immoveable; the conjunctiva inflames, and a viscid watery discharge takes place, which requires to be frequently removed. The eyeball is but little affected, otherwise than by its displacement from the increasing size of the abscess, which at last points and bursts. If the formation of matter cannot be prevented, the free discharge of it should be assisted by keeping the external orifice freely open, until the sac of the abscess has gradually contracted and closed. Where sinuses form, leading into the orbit, the orifices should be dilated, and their internal surfaces induced to take on a healthy action by stimulant applications in the form of injections, or by the insertion of substances which may exercise a gentle pressure upon them, such as prepared sponge, catgut, &c. If the abscess should have formed in the cellular texture and parts surrounding and supporting the eyeball, the cure will be effected without any deformity; but if it should be connected with the periosteum lining the orbit, it will frequently be found to give rise to very troublesome consequences, and often to deformity, by causing an aversiou of the lid affected by the disease. A case of this kind I have already alluded to, when on the subject of ectropium." 156-7.

From the relation which the socket of the eye and its periosteum bear to the brain and its membranes, every case of acute inflammation which may arise in the former should be met by a prompt and vigorous antiphlogistic treatment, such as general blood letting, purging, abstinence cupping, and opening a branch of the temporal artery or the angular vein. By these means the disease may be limited to the orbit, and suppuration either prevented, or the extent of the abscess much circumscribed.

4. When chronic inflammation has given rise to induration and thickening of the cellular substance of the orbit, the measures adapted to the reduction of the remedies of the inflammation; followed by such as will excite the action of the

absorbent system, should be adopted. Mr. Guthrie says, it may in general be removed by alteratives, by an issue near the part, by attention to the state of the bowels, and by good air and exercise.

5. In Mr. Travers' Synopsis, p. 242, we have the following paragraph on hydatids in the socket—

"In the last annual report of the London Infirmary for diseases of the eye, is the notice of a singular case of hydatid cyst protruding the globe, with the following remark: "One of these cases was a protrusion of the eye from the orbit, by a cyst containing hydatids deeply seated in the cavity. The hydatids were evacuated by a puncture in the cyst; the eye returned into its natural situation, and the patient was completely cured. This is the only instance of such an affection that has occurred since the opening of the Infirmary."

6. The aneurismal tumours which protrude the eye ball, are either of the ophthalmic artery, or of small branches, constituting aneurism by anastomosis. This is a most painful affection. Mr. Travers and Mr. Dalrymple have each reported a case of aneurism by anastomosis. Guthrie, p. 168, says,

"The first sensations experienced by the patients of commencing disease were a sudden snap in the orbit, followed by pain, and accompanied by a whizzing noise in the head. In a few hours, a copious effusion of a limpid fluid took place into the evelids, the pain increased in severity, so as to become intolerable. The eye soon began to protrude, and a tumour became perceptible, in both cases evidently of an aneurismal character. The pain was now accompanied by a noise in the head, which one patient compared to the blowing of a pair of bellows, the other to the rippling of water, and both the pain and noise were insupportable, when the head fell below the natural level."

Mr. Guthrie adds, *loco citato.*

"I have seen one case of true aneurism of the ophthalmic artery, of both sides, which terminated fatally. The symptoms were similar to those above mentioned, but no tumour could be perceived; the eye was gradually protruded until it seemed to be exterior to the orbit, but vision was scarcely affected. The hissing noise in the head could be distinctly heard, and was attributed to aneurism. On the death of the patient, an aneurism of the ophthalmic artery was discovered on each side, of about the size of a large nut; the vena ophthalmica cerebralis was greatly enlarged, and obstructed near where it passes through the foramen lacerum orbitale superius, in

consequence of a great increase of size the four recti muscles had attained, accompanied by an almost cartilaginous hardness, which had been as much concerned in the protrusion of the eye as the enlargement of the vessels."

The remedy for this dangerous affection, is tying the carotid artery of the affected side. In the case reported by Mr. Dalrymple, it was perfectly successful; but in the one previously treated by Mr. Travers, the progress of the cure was not quite so favourable, till the patient, five months after the operation, suffered abortion with profuse hæmorrhage, when the tumour suddenly disappeared. In the case of Mr. Guthrie's patient with true aneurism of the ophthalmic arteries, no operation was performed, as the disease existed on both sides.

7. Exostosis of the bones of the orbit is a rare disease. In its protrusion the eye ball necessarily changes the direction of its axis. If deep seated the character of this tumour cannot be ascertained without cutting down to it. Demours, (*Traite des Mal. des Yeux tom.* 1.) has recorded a case in which Brassant effected a cure by the application of caustic, which produced a partial exfoliation, after which the eye returned to its place. In the opinion of Mr. Guthric, if an operation be resorted to, a chissel or saw offers the best chance of success, but should be used with caution.

8. The lachrymal gland does not appear to be very liable to disease, though so often affected by mental emotions. In nearly twelve thousand patients Mr. Guthrie has met with but one case of suppuration, and none of scirrhus of this gland The latter malady has, however, been repeatedly met with, by other practitioners, and he gives the following, as the history of its origin and progress.

"The symptoms of scirrhus are at first obscure; a slight uneasiness is felt at the outer part of, and within the upper edge of the orbit, which is sometimes attended by a sudden discharge of tears from the eye, more particularly when this uneasiness amounts to pain, and is increased by paroxysms: flashes of light are subsequently perceived in the eye, and about the same time the enlargement of the gland is observed. This is soon followed by displacement of the eye inwards, with more or less of direct protrusion. As the gland enlarges it be-

comes irregular and knotty to the touch, the eyelid is stretched over it, the conjunctiva falls into a state of low chronic inflammation, and the lower eyelid is everted. The pain is, in this stage of the disease, very severe and lancinating, principally at night. The eye continues to protrude until it appears to rest upon the cheek. In some cases vision is totally destroyed, in others it is only impaired, in a third set the patient sees objects double, and in one instance I saw the eye greatly protruded without any defect of sight. The changes in the structure of the eye may be scarcely observable, or the reverse. 170.

Extirpation is of course the only remedy, and this has been several times performed with success.

9. Cartilaginous and sarcomatous tumours are occasionally met with. They may lie beneath the periosteum and implicate the bone, when the case is serious, if not hopeless. Mr. Travers (*Synopsis*, p. 243) observes—

"I have seen several cases of this description where the tumor appeared to extend the depth of the orbit, and was presenting on the nasal side. Their anterior edge is thin, being bound down to the orbitar circumference, but when they protrude and compress the globe to blindness, as is sometimes the case, it is to be inferred that they have attained considerable bulk posterior to the globe. I once removed one on the abductor side of the globe, by scraping it clean away from the bone; it was of the hardness of cartilage and of great extent. I am unable to say whether the disease returned, having soon afterwards lost sight of the patient. The impression I had of the case was unfavourable, from the character, as well as the extent and connections of the tumor.

10. Encysted tumours in the socket are more common than any others. They may be compared to wens in other parts of the adipose system. Scarpa has favoured the profession with a short, but perspicuous and satisfactory paper on these morbid structures, from which I shall make such extracts as seem necessary to illustrate their history.

"A soft tumor contained in a membranous capsule is sometimes formed in the cellular adipose substance which surrounds and insinuates itself between the muscles of the eye, and the other parts contained in the orbit, similar in every respect to the *encysted* tumors, which are generated in the other cellular parts of the body. In the greater number of cases, the tumor is as large as a pigeon's egg, and sometimes even larger. In general it contains a compact fatty substance; occasionally it is divided internally into two compartments

in one of which is found a mixture of a liquid and a cretaceous substance, and in the other a glutinous fluid resembling the white of egg; and in some cases the tumor is wholly filled with a limpid or sanious fluid.

The origin or root of the *encysted* tumor is generally seated below the eyeball more or less deeply in the cavity of the orbit; but it very rarely arises from the bottom of this cavity, and enlarges so as to press the eyeball beyond the orbit and palpebræ without its becoming perceptible. Most frequently, as I have stated, it originates below the globe of the eye, or a little to the side of it, and as it increases in volume, it projects from the orbit against the lower eyelid, so as to elevate it in the form of tumor, and press it downwards upon the cheek sometimes to the extent of half an inch.

During its enlargement, the tumor of necessity has a constant tendency to force the eyeball out of its natural situation; and as its origin is below the inferior hemisphere of the eyeball, this organ is gradually pushed upwards towards the superior eyelid and out of the orbit: so that, finally, the pupil of the displaced eye no longer corresponds, either in its position or direction, to that of the sound side. But if the *encysted* tumor, increasing from beneath the eye, incline more towards the nose than the temple, the eye is forced outwards and forwards towards the external angle of the palpebræ, and *vice versa*. In this unnatural position of the eyeball, notwithstanding its immobility, and the great distension under such circumstances to which the optic nerve is subjected, the power of sight in the displaced eye is not in all instances of this kind entirely abolished.

The deformity arising from this disease is frightful; and it is easy, from the circumstances enumerated, to foresee, how various and unpleasant must be the consequences attendant on it, as double vision, the continual discharge of tears upon the cheek, frequent pain in the eye and head, repeated ophthalmia, and the painful impression of light. 441.

In reference to the diagnosis of this and other tumors of the orbit, Demours remarks—

"It is difficult to decide in the beginning of the exophthalmos whether the displacement results from exostosis, an encysted tumour, or a fungous excrescence. It is only by the event that we can know in certain cases the nature of the cause of the protrusion. Nevertheless we may presume that exostosis is present, if the patient be syphilitic, that the tumour is scrophulous if the signs of a constitution struma are present, or that an encysted tumour exists if wens have appeared on other parts of the body." *Traite tom* 1. p. 486.

For the removal of these tumours, Scarpa gives the following instructions.

"There is undoubtedly no other really efficacious means of remedying this disease than the extirpation of the *encysted* tumor from the cavity of the orbit, which, being effected, it is not afterwards difficult, as experience has proved, to restore the eyeball to its natural situation.

This operation is executed in the following manner. The patient being placed horizontally, with his head a little raised, and firmly held by an assistant, the surgeon, with the fore and middle fingers of one hand, should draw the skin of the eyelid tense upon the tumor, and with a convex-edged bistoury divide the skin of the eyelid and orbicular muscle transversely in the direction of the fibres of that muscle and the lower arch of the orbit. This incision ought to be made with the hand unsupported, in order that the cyst of the tumor may not be included in it; and should also extend a little towards the two angles of the eye, according to the size of the tumor, in order to render the other steps of the operation within the orbit easy and expeditious; observing carefully in making this incision to avoid the lachrymal duct at the internal angle. On the protrusion of the cyst from the wound, the surgeon should separate it carefully from the lips of the wound, and to as great a depth as possible within the orbit, and then introduce on one side of it a fine hook with a single or double point, by which, having gained a secure hold of the body of the tumor, he may draw it gently towards him. In this position, with the point of the bistoury, or with the points of scissors adapted to it, he should separate it around from all its other adhesions within the orbit, as well as from its principal and deeper attachments to this cavity. It will rarely happen that, in separating the upper part of the cyst from the lower eyelid, the portion of conjunctiva, which unites the eyelid to the lower hemisphere of the eyeball, will be injured; as, in the course of the disease, this expansion of the conjunctiva, following the protrusion of the eyeball and palpebræ out of the orbit, is, as it were, everted, and consequently sufficiently removed from the summit of the subjacent *encysted* tumor, to prevent its being included in the dissection of it, and the separation of the surrounding parts. On dividing the deepor roots of the tumor, it is sometimes found that they are, contrary to all expectation, hard and coriaceous; on this account, after the removal of the tumor, it is proper to introduce the point of the finger gently to the bottom of the cavity from which it has been removed, in order to ascertain whether any portions of this hard substance remain; in which case it will be necessary to remove them by means of the small hook and point of the scissors. If the cyst, on being first laid hold of by the hook, should accidently burst, and the whole of the serous, albuminous, or puriform fluid contained in it should be in consequence discharged from it, since, as I before stated, the tumor sometimes contains only a fluid inclosed in one or more membranous compartments, it is not necessary on this account to relinquish the principal object of the operation, or that of removing the whole cyst; which may be accomplished in the manner just now laid down, although, indeed, with

greater difficulty than when the tumor is firm and admits of being drawn out by degrees from the margin of the orbit.

The hæmorrhage is never considerable after this operation ; the first dressing, therefore, consists only in gently filling the cavity, from which the tumor has been removed, with lint. The inevitable consequences of the operation are, very great pain in the orbit and head, inflammation of the eyelids, and sometimes of the face and neck ; for the removal of which symptoms, recourse must be had to bleeding, according to the patient's strength, antiphlogistic purgatives, emollient and anodyne topics, and low diet. If, on the fifth day from the operation, suppuration has commenced, the dressing is to be removed. In some cases it is necessary to do this sooner ; when, for instance, there are certain indications that the intensity and continuance of the pain in the orbit and head arise from grumous blood collected in the cavity, before occupied by the tumor, although filled with lint ; on giving a discharge to which the pain ceases.

As soon as the general and local symptoms are quieted, a healthy suppuration and granulation commences at the bottom of the wound, and the cavity containing the tumor gradually diminishes, and finally heals. During the treatment, the surgeon should be careful to keep the external lips of the wound in the eyelid separated, by the introduction of a folded dosil, in order to give a free issue to the matter discharged from the orbit, and to prevent the edges of the wound from uniting before the cavity, situated in the soft parts of the orbit in which the tumor was lodged, has closed. The cure is effected in general in four or five weeks.

The eyeball, notwithstanding the removal of the extraneous body by which it had been forced out of its natural position, does not return so soon to its proper situation as might perhaps be imagined by those who are unacquainted with the subject. The long continued retraction of the elevator muscle of the eyeball, and the elongation of the depressor, when the globe of the eye is pressed upwards and outwards by the tumor, or, in a similar manner, the shortening of the abductor and relaxation of the adductor muscle, when the eye has been forced out of the socket towards the temple, are the principal and obvious causes by which the complete cure of the disease is retarded. Immediately after the operation, indeed, when the eyeball is gently pressed on in the direction contrary to that in which it was forced out of its place, it is easily restored to its situation ; but on the pressure being removed, it returns to its former vitiated position. As soon, therefore, as the general and local symptoms, arising from the operation, have abated, and the eyeball on being pressed back can be contained and covered by the eyelids, it will be proper, by pressure upon it, to direct it towards its natural situation, and carefully maintain it there, by means of graduated compresses and a suitable bandage. We have some examples in which, even without this aid, after a very considerable time, however, the muscles of the eye have spontaneously recovered their tone and reciprocity of action ; but it is undoubtedly a great advantage, confirmed by practice, to be able

to obtain it more promptly and without much inconvenience to the patient, and not to leave the work entirely to nature." 444—446.

In addition, I shall transcribe from Mr. Guthrie's more recent work the following practical observations.

"It must be first ascertained whether the tumour can be removed without injuring the eye, and that point being decided in the affirmative, the operation is to be done in that way which will give the greatest facility to its execution, and cause the least subsequent deformity. If it tend towards the external canthus, and has displaced the eye inwards, the outer commissure should be divided, and room obtained in this way to raise the lid, so as to allow it to be dissected out. If the tumour should be, on the contrary, towards the inner angle of the eye, that part should not be enlarged on account of the lachrymal apparatus, and the operation must be done by cutting through the eyelid, in the direction of the line of the orbit, which method will succeed when the tumour is small; or by fairly dividing the eyelid in a perpendicular direction through the tarsal cartilage, by which each part may be turned outwards, and the eyeball and the anterior part of the tumour be fully exposed. Dr. Monteath relates the history of a case in which he performed the operation in this way, on account of an encysted organized tumour, of the size of a plum. The eyelid reunited perfectly, and regained nearly its natural power and extent of motion. When the first incision has been made in either of these ways, the tumour should be laid hold of with the hook, and carefully dissected out with the scissors, or small knife; and if any portions of it should remain, which may be ascertained by examination with the finger, they should be carefully removed by the hook and scissors. The after-treatment must depend on circumstances: if the tumour has been completely removed, the healing process may be allowed to go on as speedily as possible; but if any portion of the cyst or sac should have been allowed either designedly or accidentally to remain, the external opening should be kept in direct communication with it, until the wound fills up from the bottom.

When the tumour is posterior to the eyeball, or connected with it, it can scarcely ever be removed, unless the eye be extirpated at the same time; and, as its nature can seldom be ascertained previously to the operation, the removal of the whole will in general be the most advisable proceeding; this step will also be the less regretted, as the eye will, in most instances, be either useless or disorganized." 160—162.

With these extracts, which I trust will not be without interest to many of the readers of the Western Journal, I shall proceed to report a recent case of exophthalmos from a tumour of the last species, with an account of the operation for its removal.

Case.

Miss E. H. aged 17 years, was the subject of the following case. She is of feeble frame and constitution, but not sickly, except that for some years she has been afflicted with head ache. In April 1829, a small quantity of lime fell into her left eye, but the next day it was quite well. A month afterwards it was discovered by her friends, that the eye ball was either enlarged, or projected from its socket a little. The protrusion gradually increased, but not at a regular rate, being sometimes stationary for weeks, and then advancing, for a time, with greater rapidity. When she was feverish or had severe attacks of head ache, the protrusion was always observed to be greatest. She had no pain in the eye or its socket, nor was the organ inflamed. At first her sight was unimpaired ; but it gradually decayed, and by the month of October was quite extinguished.

Near the end of the ensuing May, she was brought to Cincinnati to be placed under my care. At this time, the protrusion was so great, as to occasion a most unpleasant deformity. The eye lids, still, however, by an act of volition could be brought over the eye ball ; and in sleep they nearly covered it ; but to effect this, the upper lid had become so attenuated, that the colour of the iris and pupil could be seen through it. At times a spasmodic action of the oblique muscles, projected the globe so far out of the socket, that the lids contracted behind it and gave her pain, and the same state could be produced by pressure with the finger.

The projection was directly forward, and the pupil preserved its parallelism with the other. The two eyes moved in perfect harmony, and no pain was excited in the affected organ or its orbit by any of its movements. The pupils, also, acted in concert, and in every degree of light, exhibited the same diameter. When the light, however, was excluded from the sound eye, the pupil of the other instantly expanded—showing that the motions of the iris of the unsound eye were not gov-

erned by the impress of light upon that membrane, but upon the optic nerve of the other organ.*

On feeling with a finger round the anterior part of the socket, a firm, smooth tumour could be felt beneath the orbitar arch, extending from one canthus to the other. It bore pressure without pain, and did not recede. At first view, the globe of the eye appeared to be enlarged, but on measuring the two with *callipers*, this was found not to be the case. The cause of the exophthalmos was now quite obvious ; but what might be the nature of the tumour, and whether it could be removed without extirpating the eye, remained to be ascertained.

Uncertain whether it was encysted or sarcomatous, and unable to decide whether it could be extracted without the removal of the organ, I determined to commence the operation in such manner as would provide for any state of the parts that might be found to exist. The patient having been previously dieted was placed, as for cataract. In imitation of Richerand, as quoted by Demours, I divided the external commissure of the eye lids, and then cut through the duplicature of the conjunctiva, from near the inner canthus, to the incision at the outer, so as to liberate the upper lid. A little dissection enabled me to feel the rounded edge of the tumour, which occupied the front of the entire concave of the upper part of the

* It is well known, that in amaurosis of one eye, the pupil is generally dilated, even under the brightest light. Now a question arises, why in this case the incidence of light upon the sound eye does not cause the pupil of the other to contract, as in the example before us ? It would seem, that the integrity of the sensibility of the optic nerve of the amaurotic eye, is necessary to a sympathy of its iris with the retina of the other. In Miss H.'s eye, the nerve was probably healthy, but, as we shall presently see, compressed by a tumour, which arrested the impression made upon its extremity, but did not destroy its capacity for sympathizing with the retina of the other side. If this view be correct, may we not conclude, that in the cases in which the pupil of an amaurotic eye continues associated in its movements with the other, the blindness is owing to mechanical pressure on the affected nerve, and not to the destruction of its sensibilities? And are we not thus furnished with one means of diagnosis ? I make the suggestion in a note, as too vague and uncertain, to merit a place in the report of the case.

socket, and felt like a compressed cyst. Unlike many other tumours of the same species, it did not advance on being cut down upon, nor could it be made to recede before the finger. With a pair of curved scissors, I separated its adhesions with the socket, to a considerable depth, when hooking it with a tenaculum, I endeavoured to bring it forward; but it was found to adhere firmly at or towards the bottom of the socket, and the pulling gave pain. On applying greater force to the hook, it tore out, and there escaped with the blood, a considerable quantity of gelatinous fluid, part of which was transparent, and the rest semi-opake and more indurated. By this discharge, the tumour was sensibly diminished towards the outer canthus, but retained its figure towards the inner, where I then inserted the tenaculum, and again resorted to the scissors, carrying them as deep into the socket as could be done without injuring the optic nerve, at its entrance through the foramen. On again applying force to the hook, it tore out, and a fresh discharge of the contents occurred. A finger could now be introduced into the cyst, and carried nearly to the bottom of the orbit. Employing it as a director, I siezed different parts of the sack and tore them off, but its posterior attachments remained, and pulling at them gave pain as before. With a finger and the handle of a scalpel I removed an additional quantity of the semi fluid contents. The cord of nerves and muscles could now be distinctly felt, and the globe of the eye, which retained all its movements, could be pressed into the socket, but no return of sight was the consequence. In this state of things, the question arose, whether I should finish the operation by the extirpation of the eye and the entire contents of the orbit, or leave the remnants of the sack to slough away, or shrink up and remain subject to absorption in the adipose substance of the socket. As the patient was a young female, it seemed desirable, if possible, to retain the sclerotic ball, that she might be supplied with an artificial eye, having movements in harmony with the other, and I determined on finishing the operation as it then was. For the purpose of removing any portions of the coagulated contents of the sack which might remain, I threw into the cavity

a small syringe full of tepid water. This measure I now think was unnecessary, and had the disadvantage of injecting the cellular substance beneath the conjuctiva of the lower eye lid as it issued from the wound, producing an œdema which interfered by its magnitude, with the dressing of the eye. The incision in the external commissure was drawn together with slips of adhesive plaster, the upper eyelid brought over the eye ball as far as it could be made to cover it, and a compress and roller applied.

The hæmorrhage attending the operation was inconsiderable; and the pain, although not trifling, was borne with great equanimity. The patient's pulse being weak, she was directed to take 50 drops of laudanum, and be put to bed with her head raised.

Two hours after the operation she was affected with nausea and head ache; and, her pulse being somewhat tense, she was ordered to lose 20 ounces of blood, which afforded considerable relief. At night she lost, at a second bleeding, eight ounces; and had the compresses wet with tepid water. In the course of the night she vomited, and had a sinapism applied to the epigastrium. She slept but little. Next day on removing the compress, the chemosis was very great, and the eye more protruded than before the operation. All compression was now removed from it, and a slice of fresh beef applied.*

It is unnecessary to give a diary of the case from this time forward. Fever, head ache, insomnolency, general œdema of the head and face, and great tumefaction and pain about the affected eye, supervened, and continued for several days; during which I had the aid of Doctors Atlee, Marshall and Warren. In our anxiety to save the brain from inflammation, she lost, with that previously taken, about 60 ounces of blood, none of which except the last was sizy. Cathartics, low diet,

* The soothing and antiphlogistic effect of fresh meat, from an animal just killed, when applied to the eye after severe injuries, is well known to all, who retain a recollection of the *materia chirurgica* of the GOUGERS, who formerly tore out each others eyes for the amusement of the good people of the Western country.

subtepid affusions to the head, a blister to the neck, and calomel until it affected her mouth, were, also, resorted to, and employed to such an extent, as to induce an irritable state, accompanied with head ache increased by rising up, which required and was signally ailayed by the preparations of morphia. A favourable suppuration at length ensued, and the eye was dressed with elm poultices. A gelatino-purulent discharge took place from the socket, and the incision was kept open for some time with dossils of lint. The dressings were carefully examined, but no portions of the cyst were at any time seen to come away.

It was soon observed, that the cornea would slough, but it was not finally detached for a month. When this took place, the capsule of the vitrous humour was lacerated, to promote the escape of that fluid and diminish the size of the sclerotic tubercle, so as to promote its return into the socket. Under a course of topical astringents, stimulants and mild escharotics, the chemosis slowly disappeared, and at the end of five weeks, the globe was evidently receding, while her general health was much improved. A fold of the thickened conjuctiva however, almost cartilaginous and nearly insensible to escharoties, projected between the ball and the lower eye lid, at once preventing the return of the former, and producing an ectropion of the latter. This was at length removed with a pair of scissors, and the depressed and almost paralyzed lid brought up, when it was found that it met the upper lid. A dry compress and bandage were now employed, and in a week the lid was able to retain its place and perform its motions.

At this time, twelve weeks after the operation, the eye is free from inflammation, pain, and discharge of any kind ; the lower lid has its former convexity, but the upper is somewhat flatted from the eye projecting less than it ought. The lids meet each other except when she makes an effort to open them, but do not sink in as when the eye has been extirpated. She bears pressure well over every part of the socket, no tumour can be felt any where, nor does any thing indicate a reproduction of the

disease. The sclerotic ball moves in concert with the sound eye, and seems well fitted to receive an artificial cornea.

I have thought this case, at least as well worth reporting, as many others, which find their way into the journals; and indulge the hope, that when taken in connexion with the systematized and practical view of Exophthalmos, with which it is introduced, it will not be without an ordinary interest to the profession in the West, if not elsewhere. I have been the more desirous of publishing it, because at one time, and, still, in some degree, I was disposed to regard my decision (during the operation) to preserve the eye instead of extirpating it as wrong. The inflammation was probably greater, than if extirpation had been practised; and for several weeks, there seemed little probability, that the organ would ever resume its natural situation. As it is, the patient is evidently better off than if the eye had been removed.

Tumours in the orbit of the eye are so rare (at least in the Western States) that I have never before met with a case; and have seen but one example of *fungus hæmatodes* of the eye ball. It was in a child 3 or 4 years old. On extirpating the contents of the orbit, I found the whole a mass of morbid structure, with many spiculæ of bone, some of which had such contiguity to the periosteum, as materially to interfere with the movements of the scalpel. The socket filled with granulations in a promising way; but when they reached the cut edges of the conjunctiva, cicatrization did not take place, and a fungoid tumour soon began to project from between the lids. The child was taken back to the country where it died.

Cincinnati, August, 1830.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Art.—VIII. *An Essay on the Remittent and Intermittent Diseases, including Generically, Marsh Fever and Neuralgia, &c. &c.* By John M'Cullough, M. D., &c.

[*Concluded from the last Number.*]

We resume the analysis of Dr. M'Cullough's complex and extended work. Such of our readers as may have held out to the end of what we placed before them in our last number, will recollect that we broke off in the midst of the consequences of intermittent fever; having in our closing paragraph presented the author's views of the influence of that disease, in destroying or injuring the intellectual faculties. Intimately connected with these melancholy effects, are those which this malady exerts upon the general sensibilities of the system. In illustration of which he has the following remarks:

"That this disease produces an insensibility to pleasurable impressions, if I have but recently mentioned it, is a fact too remarkable in its results not to be noticed here as a part of the general illustration of this condition of the nervous system. Nor is that consequence a secondary one, originating in false or perverted moral views, or in an aberration of the reasoning faculties; since it appears, on the contrary, where that does not exist, or to be, absolutely, an insensibility, or a primary disorder, in the nerves of those organs of sense, which are the mediums of pleasure. I cannot doubt this, from the facts related to me by patients thus suffering, and who were at the same time good metaphysicians; those facts and their complaints being, that beautiful objects, such as pictures, natural scenery, and so forth, which, before that, or when in health, had been most pleasurable or engaging, seemed to make no impression at all, on the sense; and not because their minds were affected, because these things were viewed under a state of mental anxiety or derangement, since that state of mind was not present, but simply from failing to

make the usual and expected impressions. From such patients I have received also the same complaints and statements, with respect to the other usual causes of simple pleasurable feelings ; and very particularly from those who, as musicians, were accustomed to delight in music, not less from science than feeling ; those being, that they seemed to suffer under a positive insensibility as to what used to be a source of the most refined delight, although labouring under no affection of the temper, nor any of those sensations commonly called hypochondriacal. And thus have others complained that the most grateful odours had ceased to give pleasure, that the scent of a rose was not only powerless, but produced absolute pain by reminding them of what it once was ; while every attempt to revive the former associations connected with this and other similar objects of delight, was unavailing." 159—160.

In this short history of a perverted state of all the animal sensibilities, resulting from *Malaria*, the reader will observe a remarkable coincidence with the morbid condition of the same sensibilities, the consequence of a severe *burn*, as reported in the last number of our journal.

Our author attributes much of the mischief just described, to the injudicious use of blood letting. In support of this opinion, he relates two cases, which fell under his own observation. We shall transcribe one of them.

"The first of these was a patient who had been subject to repeated attacks of quotidian, in successive years, under my own care, while a vigorous and intelligent young man of twenty-five, in the upper ranks of life. In a subsequent and similar attack during my absence, it was the fancy of his physician to prescribe blood-letting within the first days of the disease, under some erroneous view of its nature. No very obvious consequence followed the first operation ; but on the second, it was remarked that he ceased to complain as he had done, which appeared to give the temptation to a third trial ; immediately after which he fell into a state little short of idiotism, while the quotidian became also attended with many anomalous symptoms. Thus I found him, and just in time to prevent a fourth bleeding, which would probably have produced an extension of these consequences, and might easily have terminated, as I have more than once seen, in palsy, epilepsy, or death. The disease was cured in the usual way, by bark ; but the debility of mind was not removed for six months, while I have reason to suspect that it was even much more durable." 161.

On the subject of Malaria, as a simulating form of chronic intermittent, Dr. M. observes—

"I have seen four cases at least of absolute and pure mania, of most distinct tertian and quotidian forms, which, from this ignorance, as it appeared to me, became the subjects of gross mistreatment. The exacerbations were, in all, as distinct as those of a common intermittent would have been, and as regular, while the two tertian cases left a day intermediate of the most entire sanity of mind: the period of the paroxysm being a perfect mania, and not a febrile delirium, and while, in fact, no marks of fever could be discovered. And in one of these at least, the cause was as easily as it was distinctly traced; since the disorder had commenced as a common tertian, which seemed to have entirely disappeared to be exchanged for the mania: while of the other, whatever my suspicions were, I could not procure a distinct previous history, from the inattention and ignorance of the friends and the patient. In the quotidians, not only were the accessory, if obscure, symptoms of intermittent to be found on an accurate inquiry, in both the cases, but while the original cause, in one of them, was distinctly traced, so was the truth of the conclusion confirmed by the success of the method of cure which was adopted, after great maltreatment." 163.

Passing, in defiance of a natural method, from these affections of the brain, to those of the stomach, our author speaks of vomiting, as an attendant on the paroxysms of an intermittent; and informs his readers, that he has seen this symptom return at stated periods for three months in the same patient. We have ourselves met with a distinctly marked quotidian cholera, while it is familiar to the profession, that the paroxysms of an intermittent are generally accompanied with nausea and other gastric affections, leaving the patient, in the intermission, so free from any disorder of the stomach, that his appetite is keen and his digestion good. All this is what a Broussaist finds little difficulty in comprehending; believing, as he does, that intermittents are radicated in the stomach. In the opinion of Dr. M. such cases furnish us with examples of a 'real misdirection of the febrile paroxysm' or concentration of its energy upon a particular organ. In the ordinary means employed by the profession for the relief of this symptom, as it is called, Dr. M.

has no confidence, and would rely on nothing that is not, in its nature, qualified to cure the entire disease.

As might be expected, in the general derangements of the nervous function produced by intermittents, hysteria occasionally shows itself. Dr. M. has seen the *globus hystericus* recur for months, at daily regular periods, and known it cured, at last, by the remedies for chronic intermittent. We have repeatedly seen hysterical affections complicated with fever from Malaria, and can readily conceive, that in persons prone to nervous disorders, they might become the prominent symptoms, and divert the attention of the medical attendant from the real malady. Complications of this kind we have generally found unmanageable, because the condition of the nervous system on which they depend, is unfavourable to the restoration of health.

Closely allied to these affections, are palpitations of the heart, to which our author has devoted several pages. In his opinion they are true neuralgias of the organ, and unaccompanied with pain, only because of the absence of nerves of sensation—the heart being endowed with scarcely any other than nerves of motion. Under this view, the term neuralgia or nerve *ache*, is not very appropriate ; but we may understand it to mean, a morbid state of the cardiac nerves, analagous to that which constitutes the neuralgia or tic douloureux, of parts endowed with animal sensibility. When we call to mind how constantly and deeply the heart is implicated in all febrile affections, we cannot be surprized, to find our author insisting, that this organ experiences a great variety of irregular actions and palpitations in the obscure, relapsing, and chronic varieties of intermittent. That his views of this difficult and interesting subject may be fully understood, we shall present our readers with an extended extract.

"If I am, myself, inclined to consider the palpitation which is one of the most remarkable and the most distressing of the anomalous symptoms or forms of chronic intermittent, as a Neuralgia of the heart, as one of those local misdirections of this disease which, affecting other nervous organs or separate nerves, produces those very marked disorders, and if therefore my own desire would have been to have ranked it with those, and thus to have deferred it at present, I

am fearful of giving more cause, by these new views, for that incredulity and those objections which I foresee. I shall therefore treat of it here as a merely anomalous symptom of chronic intermittent; reserving to myself the privilege of a different and better classification, when the alarm at these novelties shall have subsided.

The modes, as to the patient's feeling and as to the recurrences, in which the heart is affected in these cases, are so various, that I must examine them at some length: a proceeding which becomes absolutely necessary, from the almost universal errors on this subject, from the pertinacity with which these cases are maintained to be independent nervous affections, or are referred to organic derangements that have no existence, and from the consequent maltreatment of the patients; to which are too often added alarm and anticipations, materially aggravating a disease which is in itself sufficiently distressing.

Increase of the velocity or of the strength of the circulation, or of both, attended by an increase in the force of the blow given by the apex of the heart, is the most simple of these affections, while this may be merely sensible to the patient himself, or else may be visible to a bystander. In other cases, that increase of action is attended by irregularities in the force; or there are occasional palpitations, of short duration, but repeated; or they are sometimes limited to single starts or spasms, or else there are intermissions under every irregularity that can be imagined. These disordered actions, which must be felt to be understood, are often attended with the most distressing sensations in the brain and in the whole system, affecting even the mind in various ways; producing among other things uncontrollable fear or inexplicable alarm, and sometimes seeming to threaten immediate death. When of any duration, they also often leave the patient exhausted, as if from the excess of fatigue; and this, constituting an inexplicable derangement, often lasts during a whole day, or long after the palpitation has ceased. In the heart itself, among other strange sensations, it is not uncommon to feel as if it was grasped by a hand, and compressed; while there is sometimes also the sensation of its being paralyzed, or about to cease from motion altogether. In other instances, and in the mildest cases, the affection is no greater than that which commonly attends fear, or that peculiar and slight alarm which may occur, for example, in a timid or anxious speaker about to rise in public; and, apparently in consequence of association, it is the effect of this to produce alarm, or fear, or anxiety, for which the patient, aware of its real cause, can find no reason, but which another, ignorant of this, or morbidly active in seeking for moral evils, easily refers to events or circumstances in life that are dreaded or anticipated. Or, as will be very obvious, the principle of association produces, by inversion, the passion or feeling which, in the ordinary cases, excite these peculiar actions of the heart. Hence it is, that to be aware of the nature of this disorder, is important to the patient; as, by explaining to him the true cause, it will prevent him from seeking for imaginary evils that will aggravate his sufferings.

Such are the more ordinary forms of this palpitation ; and how often it has been referred to enlargement of the heart, to ossifications, and so on, I have seen in but too many instances. But I must also remark, that this diseased action sometimes takes place in the inferior aorta, as well as in the heart, or is occasionally transferred from this organ to the artery ; constituting an affection well known to occur in what is called dyspepsia, which, for aught I know, may depend on many nervous diseases, but which, as before observed, I have often most clearly traced to the class of disorders under review. I need not remind the medical reader of the description of this particular disorder given by Dr. Baillie ; nor ought I to pretend to conjecture the cause or causes as it did occur to him ; but while I have traced it to the cause under review, I am bound to add that this inference was drawn from observing that it alternated in relapses, and indeed in periods of long duration, with a palpitation of the heart dependent on intermittent, and itself alternating with relapses of common quotidian, as well as with the intermittent periods themselves, in a case of long standing subject to many other anomalies.

If the real cause of these affections of the heart be often obscure, there ought never to be any difficulty in ascertaining their nature when any other symptoms of chronic intermittent are present, when the patient is constitutionally subject to this disease, or is known to have suffered formerly from it, or when, as frequently happens, this affection alternates in any manner, with any of the ordinary, or of the anomalous symptoms of intermittent. These form the easier grounds of judgment to the physician, often as they are all overlooked ; and in these several modes do those derangements of the heart often occur.

Presuming that the disease is regular in its returns, and connected with obvious intermittent, the palpitation, as far as I have observed, belongs to the same period of the paroxysm as the cold fit, or generally so ; while in cases where it is the only symptom, or the only very visible disorder, it has equally appeared to me to be the substitute for this. Thus also, when slight, it may usher in the paroxysm, subsiding in a short time ; and here it corresponds with that general and common affection of the circulation which attends the commencement of the diurnal fit. The duration of a paroxysm of this kind, like the violence, is consequently variable ; extending from an hour or less to twelve or more ; possibly, in such cases, occupying the entire time of what would be a paroxysm in the common intermittent : and I have met with one instance of a double quotidian form, in which the two returns left very little repose to this organ during the twenty-four hours, and in which the patient was nearly deprived of all sleep, procuring it only during the very short intervals. This case, after lasting three months, while sentence of condemnation had also been passed against the patient, under the supposition of a disorganized heart, was cured in two days by the remedies of intermittent ; proving clearly that the judgment which I had formed respecting it was correct." 166—169.

Palpitations (neuralgias) of the heart are generally in the opinion of Dr. M. connected with chronic intermittents, and in most cases, if not all, associated with some of their collateral symptoms ; which, if physicians had been aware of the connexion, would have been very commonly noted. Many obscurities and irregularities contribute, however, to confuse the judgment and mislead the practitioner.

"It happens that the fits of palpitation are interrupted, as I have just remarked ; and the analogy, in this case, will be found in those intermittents where the common paroxysm is similarly irregular, or where there is an intermixture of numerous cold and hot stages in one paroxysm. If there are two fits in a day, it may be a double quotidian form, such as I have just described ; while it is plain, that if regulated by the other complicated types of intermittent, there is scarcely an irregularity which it may not exhibit. If it is irregular in ways not reconcilable to those cases, its analogy will still be equally found in those chronic intermittents which consist in irregular returns, of an endless variety ; while, if only occasionally produced, and by some cause inducing debility, irritation, or perhaps mental affections, we have precisely the same appearances in the common chronic intermittent. And thus, in fact, do the fits of palpitation frequently occur, in patients who have been infested with chronic intermittents ; single attacks, lasting perhaps for a few hours, not to recur for some weeks or months, and often traceable to a marked cause.

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One other mode and cause of irregularity must however be pointed out ; because, while it is needful to be known, it belongs to the proofs of the nature and cause of this disease. In this case, when the palpitation disappears, it is to be replaced by some other local symptom or anomaly, or else by a perfect intermittent, or by some irregular and partial form of this. In practice, here, the error is to suppose that the palpitation is a disease of itself, distinct from the others, be those what they may ; that the patient, for example, has a disorganized heart ; and an intermittent also, or some other disorder, or that the whole are symptoms of some nervous disease. A more careful observer, or one at least who is acquainted with this subject, will however, perceive that if the palpitation yields to an intermittent, it is because the disorder has changed its character ; or that if vomiting, or hysteria, or diarrhea, or any other of the symptoms so often mentioned, appear when this retires, it is because the local action of the chronic intermittent has taken a new direction. And thus, by watching, does he learn to explain what appeared to him under a false light, and to regulate his practice accordingly." 170—171.

It deserves to be known and recollected, that, while the palpitations are essentially the offspring of the fever, or of the Malaria which occasioned it, they are sometimes so much influenced by external or adventitious causes, such as position, exercise, &c. as to favour and perpetuate the idea, that they are dependent or organic læsions, when in reality they are parts of the fever, or substitutes for it.

"Thus, while a fit of palpitation can sometimes be removed by various means, so is it irritated, or augmented, or prolonged; while these facts tend to mislead the practitioner as to the imagined cause and nature of the disorder, as they may also afford arguments to those who are unwilling to admit the explanation which I have here given. I may state the most extraordinary case of this nature which ever occurred to me; because while it had been determined that organic and incurable disorder was present, it vanished suddenly on the appearance of an intermittent quotidian, which was soon afterwards cured.

In this case, the patient had no relief from the palpitation, which was both incessant and violent, except in the erect posture, when awake, while it returned instantly on sitting down, and while, frequently also, it could be removed only by walking about the room, in which manner he was compelled to pass nearly the whole day. Thus also, at night, was it instantly produced by attempting to lie down; so that the little sleep that was procured, and not till after urgent necessity, was to be obtained only by being bolstered up as erectly as possible." 171.

Dr. M. believes in the identity of these palpitations, with many examples of what are called rheumatism of the heart, and, in evidence of his opinion, cites a case which we think it worth while to extract.

"In this patient, the palpitation was of the most severe character, and had lasted for some months, occupying a large part of every day, or recurring in successive fits, but without any great regularity, and always increased by irritations of various kinds. It was of that kind and character which seemed to justify the belief in an organic disease, as far as this ever can be conjectured: while there are no marks of temporary fever, or of any other derangement, to be traced, and while the patient was even robust, and, when not suffering extremely from the fits, capable of all the usual occupations of a very active life. After much cross-examination it was discovered that he

had for many previous years been subject, annually, and nearly always at the same periods, commencing with the end of summer, to different diseases; being in one season, periodical toothach, in another diarrheas, in a third rheumatism, and in others, anomalous affections of the urinary organs, dyspepsia, hypochondriasm, pulsations of the aorta, and further, to a marked, though a very slight, quotidian intermittent. Thus was my judgment of the true nature of the disorder formed, while it was confirmed by the further progress; as it afterwards disappeared almost suddenly, to be replaced by a periodical rheumatism of the deltoid muscle, which was succeeded by "tic douloureux" or Neuralgia of the face; and, in succession, by quotidian intermittent and other Neuralgias; that patient having in himself exhibited a perfect nosology of all the anomalies of chronic intermittent, of which this very marked and independent palpitation was one. And if this is one of the most perfect cases which I have met with to prove the cause of such palpitations, so does it afford a marked evidence, to be confirmed hereafter by much more, of the nature of all the Neuralgias, of their common connexion, and of their dependence on intermittent or their origin in Malaria." 173.

From palpitations our author proceeds to speak of palsy of the heart, of which he cites a curious case that fell under his own observation, and was connected with a chronic quotidian, but we have not room to notice it any further.

Having disposed of neuralgias of the heart, embracing what is vulgarly denominated rheumatism of that organ, our author, after an apology for his want of method, arrives at the study of rheumatism of the muscles and membranes, generally, which in his view is often, at once, a mode of neuralgia and of intermittent.

"The most simple case of all, while it is one that ought never to be mistaken, is that where a rheumatic pain in some particular muscle is strictly periodical, returning and ceasing in regular paroxysms. In such cases, the part affected may sometimes be exceedingly limited, occupying only a few fibres of a muscle, though, even then, the pain is often severe; while in others, the extent may be very considerable. Thus even the whole body may suffer under it; or rather there may be so many different muscles affected, in some place or other, that scarcely any movement can be made in which some one or more of the disordered portions is not brought into action; conveying thus, to the patient, the feelings as of a universal rheumatism.

If such a periodical recurrence is not sufficient to satisfy a practitioner respecting the true nature of such a disease, it will often be found attended with other symptoms explanatory of its cause, while

these also form the proofs of the propriety of thus considering and arranging it. Thus it will be found to occur in persons who have been, at other times, affected by intermittent: forming, in itself, a period of relapse, and a substitute for the more common modes of the chronic disease. In other cases, the rheumatic pains will alternate with any of the other marked symptoms belonging to this disease; as, in the case last described at so much length, it does with palpitation of the heart. Or it may cease on the appearance of the common symptoms of intermittent, or the patient may recollect that it had formerly existed and suddenly disappeared; without apparent cause, or from change of place, or from the action of feeble or fantastic remedies. And hence, I may remark by the way, it is, that so many absurd or imaginary remedies have gained credit in rheumatism generally; as it is the character of intermitterts thus to cease of their own accord, or to yield to trifling changes, or even, as is abundantly notorious, to give way to remedies acting on the imagination; even to charms." 179.

To detect the true character of many cases of this kind, Dr. M. thinks is rendered difficult, by the prevailing prejudice, that rheumatism is always an original and distinct disease. Under this erroneous impression, many cases, which are really modes of obsure and chronic intermittent, are disposed of by the routine practitioner, under the convenient designation of 'chronic rheumatism.'

"It is plain that, under those ordinary and current views, the cases to which I have here been referring will generally fall under the division of chronic rheumatism, as the symptoms in question are the produce of a chronic disease. I do not pretend to enter into all the possible causes of chronic rheumatism, nor to conjecture what proportion of the cases which occur, be they local or more general, may be original diseases of a distinct nature, and what comparative number may belong to the cause under review. But it is probable that the latter cases do form a very large proportion of the chronic rheumatisms occurring, and that we are thus enabled to explain their inveteracy of duration, as well as their tendency to recur; properties of all the disorders arising from this cause: while it will also explain the action of the modes of cure that are successful in this disease. Hereafter, possibly, physicians may be induced to examine this disorder with more care, and by this light; and we may then perhaps approach somewhat nearer to a true view of a disease, of which our ignorance has hitherto been so disgraceful." 181.

From chronic, Dr. M. proceeds to acute rheumatism, which he presents to the consideration of his readers in the following manner—

"The question at present is, whether there are not acute rheumatisms of the most regular form, which are truly modes of the quotidian intermittent, or of the remittent, possibly, originating in the same causes : and if it shall be decided that this is the fact, and that there is also an acute rheumatism generically different, then we shall probably be able to explain the causes of the contests so long maintained respecting the use of bark in this disease.

The facts which would seem to prove this opinion, are chiefly these. There is a periodical exacerbation, if there is not always an absolute remission of the pains ; and the duration of the disease is very analogous to that of a remittent, or of one period of an intermittent. The causes correspond, if they are not identical, while the remedy is often the same ; since, after all that has been disputed, there is no doubt that many cases are cured by bark, and that blood-letting is not only often ineffectual, but pernicious ; its action altogether, being, in fact, very similar to that which it exerts on remitting and severe intermitting fevers.

Thus while, in acute rheumatism, the misapplication or abuse of blood-letting often produces the chronic disease, so does a similar practice frequently induce the chronic state of intermittent, or convert an acute and terminable case into a durable one. It is not impossible also that the termination of the pains of acute rheumatism, succeeded by affection of the brain, and so often producing death, may be an analogy to what happens in other cases of intermittent diseases, where one local affection is exchanged for another, or disappears to be replaced by an augmentation of the general fever : while I can further easily understand, that the misapplication or the injudicious excess of blood-letting in such a case, may absolutely produce that comatose state which sometimes occurs in this disorder, and which is so generally considered a transference of the inflammation ; since this is the very apoplectic state, if I mistake not, which is produced in the same manner in remittent and intermittent fevers. With what propriety therefore blood-letting is resorted to in the cases of this nature, will be abundantly palpable, should this view be but even sometimes correct." 181—182.

Devoting a page or two to rheumatic affections of the intercostal muscles, of the loins (lumbago,) and of the face, the first of which is often confounded with pleurisy, our author dismisses this branch of his subject, and passes to 'other diseases of a local or peculiar nature, connected with intermittent, as symptoms or modifications.'

Diarrhœa is one of these varieties. In its chronic form our author thinks he can discover much, which indicates its dependence on, or connexion with, obscure intermittents. He has seen it assume both a quotidian and tertian type. He has, also,

met with a cough, dry, spasmadic, and recurring in paroxysms, in one case daily, which he feels bound to regard as bearing the same relation to intermittents.

We may observe, that in many cases of these maladies or symptoms, their proximate cause may be a diseased liver, the offspring of intermittent fever, as diarrhœa and cough are both known to result from hepatic derangements occasioned by other causes than Malaria. Dr. M. has, however, met with a catarrh, which makes quotidian attacks in summer, and has received the appellation of 'hay fever,' which he is inclined to regard as a variety of intermittent. We have ourselves, in several instances, known intermittent and remittent fevers, to make their onset with catarrhal symptoms, which could not be traced to any exposure to vicissitudes of weather.

When intermittent fever, or its cause, awakens disease of the lungs, the malady may be mistaken for phthisis. Dr. M. has cited several cases of this kind, which were speedily cured by the bark. We recollect many years ago, to have seen a case of true hectic, so much aggravated by the residence of the patient in a miasmatic atmosphere, that for a while the paroxysms took on the character of a true ague and fever, or at least the chill was, for a time, augmented to a shake; and a physician not previously acquainted with the case, would have pronounced it an ague complicated with pulmonary derangement. The patient died with the usual symptoms of consumption.

The last variety of the local anomalies of intermittent fever which our author mentions, is strangury, of which he has seen three well marked cases. In all, its nature was at first mistaken. They were cured by changing the treatment, and one of them especially, was removed in a very pointed manner by a few doses of quina.

In the conclusion of this long, and in many respects, interesting chapter, our author inquires how far he has been anticipated in his views by previous writers, but we shall pass over the results of this investigation to enter upon the cure of intermittents.

This makes the subject of Chapter VII. which runs through nearly 40 pages, but we do not propose to dwell very long upon them. Dr. M. begins, indeed, with the candid declaration, that he has nothing strictly new to present, under this head. The aim of his book is not to set forth the treatment of marsh fever, but its associations and consequences, many of which he thinks have not hitherto been understood or even suspected to exist, by the profession.

Of the method of cure which he prefers, we cannot say has invented, a brief summary must suffice.

Declining to enter upon the treatment of the severe and malignant intermittents of hot climates, his *methodus medendi* is adapted to the simple intermittents of the north. He first speaks of charms, amulets, spiders, abracadabras, and other contrivances for making a strong impression on the senses, the feelings, and the imaginations of the sick; by which, not only intermittent fever, but many other diseases are sometimes cured.

His next class of remedies comprises alcohol, laudanum, cayenne and other diffusible stimulants, which administered before the chill are frequently found to avert the paroxysm. Of the whole, we regard opium and its preparations, at once the most efficacious, and the most harmless when unsuccessful. We are not prepared to believe, that it is entirely in virtue of a simple, exciting power, that the medicines of this class ward off the fits of an intermittent ; for, if we are not greatly mistaken, the union of tartar emetic, in a large dose, with opium, increases the efficacy of the latter as a preventive of the paroxysm ; while no one can pretend that the stimulating effect is not, thereby, diminished rather than increased. Of administrations in anticipation of the chill, we entertain from experience a favourable opinion ; but it must be confessed, that they sometimes augment the hot fit, and, especially, that they may increase the cerebral affection. They have seemed to us particularly beneficial, when they excited the functions of the skin. Hence much of the benefit from an emetic, from the union of sudorifies with narcotics, from lying in bed and drinking warm herb teas, and from the external application of heat. If

any great function, such as the cutaneous, *can* be kept up by our efforts to ward off the paroxysm, they will be successful.

For moderating the cold stage, he advises hot drinks, and external warmth, and prohibits bleeding and purging; both of which, however, when it is protracted to an unusual duration in strong constitutions, have been found useful. Indeed, we have repeatedly met with cases, in which the pulse, *before and throughout* the cold stage, was strongly excited, the patient at the same time suffering with thirst, head ache, back ache, pain in his joints, and sometimes delirium. In such cases, to throw in diffusible stimulants during the chill, can work out no other effect than to aggravate the hot stage. Of emetics in the former, he entertains a better opinion, in which we concur; but if the constitution of the patient be shattered, they should be combined with laudanum—a union productive of the most agreeable effects, in all cases of great debility or nervous irritation, where emetic medicines are indicated.

As to the hot stage, while, from the very constitution of the disease it will subside if left to itself, it cannot be denied, that the patient, thus abandoned, is often left by it much worse than it found him; and, therefore, it is our duty as far as possible, to mitigate its violence and limit its duration. Moreover, it is during this stage, that we may prepare the patient for the reception of the bark or its preparations. We are aware, that there are physicians who regard a preparation of the system for this purpose, as a work of supererogation, but as a general rule, we can by no means agree with them. Two modes of preparation, according to our own experience and reflections, are important. First—If the patient be of a sanguine temperament and plethoric habit, the quantity of blood and the power of the heart and vessels, should be reduced. Secondly—As the stomach and bowels are very commonly over charged with unhealthy secretions from the liver, and mucous membrane, they should be evacuated. If the former be not attended to, bark and diffusible stimulants may awaken inflammation; while, until the latter is corrected, those medicines are often rejected, or if retained, cannot produce their specific effects.

In addition to blood letting, or in most cases without it, emetico-cathartics are important in the hot stage, as contributing to fulfil the indications just named, not less than to alleviate the sufferings of the patient and shorten their continuance. Of the formulæ for these objects, there are, among a multitude, two from which we have derived so much aid, in a long course of practice, that we should be ungrateful to the eminent men to whom we were indebted for them, not to make an acknowledgment of our obligation. The first is the union of tartarized antimony with the sulphate of soda or magnesia, both in *dilute* solution, and administered in 'broken doses,' till free evacuations take place. Our knowledge of this little recipe was derived, in our pupilage, from Dr. Robert Jackson's Treatise on the Fevers of Jamaica, and the Intermitting Fever of the United States, republished in Philadelphia, 35 years ago, and, in our humble opinion, one of the most valuable and unpretending practical works, which has appeared either before or since. The second formula is from our distinguished, but strangely neglected countryman, the late professor Rush, whose writings, in less than 20 years from the time when he exercised an almost absolute sway over the medical mind of the United States, have gone out of fashion, and are read by no one. It consists of the well known union of tartarized antimony, calomel and the nitrate of potash. Our readers will observe, that both formulæ contain a refrigerant, neutral salt, on which, we are constrained to believe, not a little of their antiphogistic power depends ; and which gives to them, in the case, under review, so decided a superiority over the irritating and drastic cathartics.

In the cure of intermittents, Dr. M. lays but little stress on any thing, except bark and arsenic, and their preparations ; a sentiment in which we entirely concur. We have seldom seen agues (vernal excepted, which will often 'get well of themselves') cured without the administration of one or other of those medicines, or of their chemical preparations. Disputes have, now and then been gotten up, as to the administration of the bark in the early stages of intermittent. It is not our in-

tention to enter the list, but we may observe, *en passant*, that if the active course of depletion which we have advocated, has been employed in the first paroxysms, the bark may be given, with safety and effect, at a much earlier period than it otherwise could ; and thus the aggregate of the patients sufferings be greatly diminished. Moreover, in malignant intermittents, it cannot be doubted that the exhibition of the bark immediately after an emetic, conjoined as it should be with laudanum, or without any previous preparation, may not only be safe, but proper and necessary. As to the quantity in which it should be given, an equal diversity of opinion exists, and the amount has varied from a drachm to an ounce, at a single dose ! This has partly arisen from difference of character in physicians, and partly from difference of character in epidemics. On the whole, we incline to liberal doses, as most effective in arresting the disease ; and concur in the practice of those physicians of the Western country and elsewhere, who have met certain epidemics with immense doses of this, their only known antidote. Different *corrigenda* have been united with the bark, a practice which has, by some, been condemned. It may be admitted that they do not augment its inherent curative powers, but they, sometimes, answer other valuable ends. Thus cayenne, cinnamon, or cloves, may reconcile the stomach to its first impress, and thereby promote the retention of the requisite quantity ; jalap, as proposed long ago by Senac, will maintain the peristaltic action of the bowels, which should never be allowed to flag ; laudanum will restrain the same action when too great ; the serpentaria will keep up the functions of the skin ; and the super tartrate of potash sustain that of the kidneys ; all of which are aids to the specific influence of our medicine, in arresting the recurrence of the paroxysms, which all of them, unaided by *it*, could not in general accomplish.

Of the relative powers of the bark and the preparations of quina, we shall say nothing. In general they both succeed, and sometimes both fail. We consider the bark the more stimulating of the two, and, therefore, better adapted to pre-

tracted cases. The best mode of administering the quina, we believe to be in large occasional doses, in substance, and in powder instead of pills. United with opium or Dover's powder, and given before the chill, its effects are often admirable. When it produces constipation, aloes, in subtle powder, is an excellent corrective. They should be intimately blended and formed into a linctus or bolus.

Arsenic, with Dr. M. is, on the whole, a favourite medicine, and constitutes as we shall hereafter see, one of his two principal remedies for the distressing neuralgias, which he thinks of marsh origin ; and which are presently to occupy our attention. He prefers to give it in substance, and recommends a sixteenth of a grain, rubbed down with loaf sugar, 3 or 4 times a day. The late eminent professor Barton, in his lectures, recommended the following formula, which we prefer to any other.—

R. Acidi Arsenici gr. j.
Pulv. Opii. gr. iv.
Misce fiat pil. xvj.

Dr. M. thinks, that in proportion as an intermittent, in its pathological characters, approaches more nearly to a remittent, arsenic sinks below the bark in efficacy ; and that, moreover, its value is very small in protracted cases. On these points however, we would remark, that when the fever approaches to a remittent type, the bark itself is in most cases improper ; and that in chronic intermittents arsenic, *is* efficacious, if it be united with opium, and the patient at the same time be duly stimulated. A recent and simple intermittent, particularly of a tertian type, is that, in which Dr. M. has found it most effective.

Our author is not, of course, insensible to the great importance of change of place, in chronic intermittents. While the patient continues to inhale or *swallow* Malaria, it is not always possible, by the art of medication, to make him a sound man. In every protracted and obstinate intermittent, the subject of it should, if possible, be removed to a healthier situation, where the disease has often ceased without medicines, or yielded to their power which before was inoperative.

Dr. M. has devoted several pages to the diet and drinks of persons inhabiting aguish situations, or affected with the disease

in its chronic form. If his motto is not quite, *vive la gourmandise*, he evidently looks with an eye of toleration upon the *bon vivans*. He thinks, that a much greater number are injured by a defective, than an excessive diet, and cites many facts in support of his proposition. On the fertile banks of the Ohio, abounding in corn and whiskey, if not in 'corn and wine,' we have too few examples of habitual starvation, to render us competent judges ; but on the whole we are inclined to subscribe to his doctrine ; and to adopt his opinion, that the animal body is better prepared to dispose of a superfluous diet, than to supply the deficiences of that which is too sparing and innutricious.

With these remarks we shall dismiss the subject of fever, in its more palpable type, and proceed to the analysis of the second and more interesting part of his work, which treats of the various NEURALGIÆ.

In the common parlance of the profession, there are '*nervous*' and '*spasmodic*' pains, which every student is taught to consider as widely different from '*inflammatory*' pains. Loose and exceptionable as these phrases are, it is undeniable that they are intended to indicate very different pathological states. Of the latter we are supplied with examples, in the *furunculus* or common boil, and in acute pleurisy ; while as familiar specimens of the former, we may cite flatulent colic, certain varieties of tooth ache, sick head ache, and the painful suborbitar affection of the face, denominated *tic douloureux*. In these two groups of maladies, the nerves of course are affected, otherwise there could be no pain ; but in one case the affection is connected with a manifest inflammatory plethora of the part; while in the other no such engorgement in general exists, and they even appear, in some cases, accompanied by an opposite condition of the circulation. Now it is to this class of pains (nervous or spamodic) in the popular vocabulary of physic, that the elegant and classical cognomen NEURALGIA has recently been applied. At first it was, perhaps, intended as a mere substitute for the vulgar French epithet, *tic douloureux* ; but has at length, by Dr. M. and other writers, been extended

to a great number of affections which are supposed to depend on the same pathological state, with that painful disorder. The tabular view prefixed to this article, has, already, given the reader an idea of the number and variety of the affections, which our author has marshaled under this new head; and on this arrangement rests one of his claims to the merit of being a discoverer; the other is associated with it, and consists in the enunciation, that these various neuralgiæ, are in general, the offspring, direct or indirect, of Malaria,—direct when produced without a remitting or intermitting fever—indirect when preceded by that disease. To the establishment of these two general propositions, and the developement of the corollaries, which depend on them, Dr. M. has, as he informs us, devoted many years of observation and reflection; the fruits of which are spread before the profession, in a series of chapters, which make up more than half his book.

The neuralgia, vulgarly denominated tic douloureux, first receives attention, as being what naturalist call the prototype of the genus. After protesting against limiting the term to a painful affection of the suborbitar branch of the fifth pair of nerves, our author proceeds to describe a paroxysm of this deplorable malady, in which he endeavours to show its resemblance to a paroxysm of intermittent fever; and as his manner of viewing this subject, is in some degree applicable to all the other affections which he refers to the same class, we shall make a liberal extract.

"Immediately before the attack, if the pulse is examined, it will be found to put on that character which it possesses in the cold stage of an intermittent; while, through the progress of the poroxysm, it passes through the other analogous changes. If also a watchful patient, at least when directed to do so by his physician, (which I fear has rarely been the case,) attends to his previous feelings, he will find that there are most commonly some indications of a cold stage, generally obscure, it is true, as is the case in most of the anomalous and chronic intermittents, but still discernible; while doubtless it may sometimes be wanting or difficult to make out, as is so often the case in such obscure intermittents. When most distinct, it is like the sensation of cold water applied to some part of the face, or trickling over it, being indeed often thus described by patients; or there may sometimes be a sensation of cold, more general, if also transitory. The skin, at least of the face, also becomes pale and shrunk, with that peculiar physiognomy attending ague, so indicative of all these diseases, if so perpetually overlooked: and this is a symptom which, if unno-

ticed by the patient, ought never to escape the eye of an observing physician, explanatory, and often useful as it is. Occasionally, this paleness is local instead of general; and I have seen cases where I could pronounce that the paroxysm was threatening, from one side of the face turning suddenly white while the other retained its natural aspect and colour.

If this is the cold stage of this particular intermittent disease, the fit of pain appears to belong to the hot one, or thus at least has it always seemed in my experience: and if, as a hot stage, it is not a very marked febrile state, it is sometimes sufficiently apparent, in an increase of heat, local if not general, in the change of the pulse, and in a thirst which occasionally accompanies it. And if it is a slightly-marked hot fit, it is not slighter than that which often occurs in chronic intermittent when other kinds of local symptoms are present, or even when the cases are pure; while in such cases, as well as in this and other Neuralgiæ, the sweating stage is rarely well marked, or is perhaps only discovered by the facility with which that effect is produced by exertion.

Thus I have described a paroxysm of Neuralgia as resembling that of an obscure or chronic intermittent, with the super-addition of its peculiar pain or local affection of a nerve; and it remains to see what resemblance the general course of the disease bears to the common or simple intermittent, or rather, since I am not yet formally discussing the proofs of identity, what are the remaining characters of this disease.

It may be considered that there are two forms of this, as of other Neuralgiæ, the acute and the chronic; or the disease may be new, or habitual; a distinction which it is important to make, because the latter is, like all intermittents, far less regular than the former, while being perhaps more observed, it has aided in misleading physicians respecting the true nature of Neuralgia.

In the recent state, or in the first case, it returns in distinct and defined paroxysms, occupying a certain number of hours, or even, in some instances, but a few minutes, and leaving an interval of health. Where I have had the best opportunities of observing it, the returns are daily, or the type quotidian, while they maintain a regularity of period similar to that of common intermittent, and subject also to the same variations as to time. If I have also met with tertian, and even with quartan periods, they have been, in my own experience, more rare: nor, in these cases, has the disease been so apparently regular, though I have little doubt that the practice of others will here supply my deficiencies.

Now when the disease is of long standing, or of a chronic character, it is less distinguished by this regularity, and, further, as far as I have had opportunities of seeing it, is even more uncertain than the analogies, in common or anomalous intermittent, with which it is best compared; with the single exception, as far as I have seen, of the affection of the heart. Whatever may be the causes of this irregularity, if it is not the only fact which has aided in misleading physicians respecting the true nature of this disease, it is one which will probably cause many to suspend their judgments upon it at present, or to deny altogether the theory which I have here adopted. As an instance of these cases, I may quote one from Sauvages, where had it not been so durable, and not watched by an attentive physician, no regularity would have been perhaps suspected. In this, the pain occurred but once in eight days, yet never failing, and lasting thirty hours; while, being in the temporal muscle, it is called by Salius the *Hemicrania lunatica*. The entire duration extended to three years and a half.

I know not that I am able to explain why it should appear to be peculiarly irregular when compared to other chronic intermittents; yet if I fail, here or any where else, in elucidating difficulties, I must attribute it to a very narrow experience, arising from circumstances not worth detailing, and which I have vainly attempted to atone for by increased attention, finding little assistance from personal communication or printed records; so unsatisfactory are all these, from the fundamental deficiency of a system of observation founded on true views of the nature of these disorders.

As the matter stands, however, the first cause of obscurity must be sought in the rarity of the highly-marked cases and rigidly-local affections of this nature, which have secured for themselves the name of Tic douloureux. There are consequently a small number of cases from which to form an average and judgment; whereas, were I to judge from all the cases of similar disorders, differing in violence and differing in place, which I intend here to rank under the same disease, I should decide that in the mass of neuralgic cases, the regularity was fully as great, under any type, as in the most acknowledged chronic intermittents.

Another ground of erroneous judgment as to this question, and which indeed I ought to have named first, has been the want of a correct original theory of the disorder; a want which, in science universally, is the parent of erroneous and deficient observation. In the ague, of whatever type, the most vulgar know the theory of this disease, and thus mark its regularity; while in this, where it is not known or expected, it is not noted, either by patient or physician: and accordingly, I have, in numerous cases, ascertained that a neuralgia, before supposed uncertain, or never attended to, was found to be perfectly regular, as soon as either the patient or the physician had been informed that such was the character of the disorder. And it must be noted here also, that while a daily attendance on the part of the physician will scarcely happen in many cases, even among the opulent, while, with the lower classes, that is likely to be very casual, it is abundantly easy to conceive how the regular returns of a disorder, not previously suspected to be regular, should be overlooked.

There is yet another cause which has prevented the regularity of this disorder from being marked, where it is actually present: and it is an important one in some cases, as connected with the history and nature of Neuralgia. When should the nerve be affected at the habitual period, that affection is not always a fit of the violent pain. On the contrary, it may be a very slender one, scarcely noticed by a patient used to much greater suffering; or it may appear as a toothach, or a headach, or what is called a rheumatic pain of the face: and thus, although really a paroxysm of the disease, may deceive both patient and physician, and most of all when, as in the cases last enumerated, it will admit of some common or vulgar name. Such in fact is the character of the Neuralgia, in whatever place situated: and the fundamental error here has been founded on that to which I formerly alluded, namely, the assigning to a name expressive of violent pain, and the separating this particular variety from all its analogies and variations. Such are the endless errors produced by ill-chosen terms, and by giving to such terms an improper value. And still further, as I shall hereafter more decidedly show, as this disease is but a mode of the intermittent, it may be exchanged for or replaced by a common paroxysm without any local pain: while even that paroxysm may be so slight as to attract little notice from any one, and at least of all from a patient accustomed to much keener sufferings.

Last of all, and particularly when of long standing, it becomes, like every other chronic intermittent, a truly irregular disease. Thus it may come as a single attack in the midst of weeks or months of repose, excited by some occasional cause; or it may, in the same way, adopt any modes of irregularity; which it is unnecessary to describe again, as it would be merely to repeat what I formerly said respecting chronic intermittents in their ordinary character.

Such then is the total character of the common Neuralgia of the face: and as I have dwelt on it at some length, this will render it less necessary to be minute as to its varieties, or as to other Neuralgiæ; since, the same general account will apply to all. Its similarity at least to intermittent, will even now be apparent, and very decidedly to those varieties which are attended by local diseases or symptoms; while the further evidences will appear in their proper time. And if I might now treat of its cure, it will be best to defer this till I have enumerated all the other disorders of the same nature; since, with small exceptions, the same general rules will apply to all." 244—247.

From tic douloureux, he proceeds, in Chapter XI, to treat of periodical headache, and of vertigo.

That the headache in question, is a true Neuralgia in its pathological character, while ætiologically it is identified with intermittent fever, we are not at liberty to doubt. Indeed we do not think that a better case could be selected, to show the connection between Malaria (or the cause of intermittent fever whatever it may be) and *neuralgic* pain, (we know not how to avoid the solecism) than the one now under consideration. We have had, and still have numerous opportunities of witnessing this distressihg disease, and can lend the weight of our humble testimony to the fact, that the pain is invariably of that kind which is denominated spasmodic, nervous or neuralgic—increased by blood letting, purging, and low diet, and removed or mitigated, by powerful stimulation. We have more than once known it mistaken for phrenitis, and have seen the conjunctiva of the eye of the affected side, engorged with blood, the eye ball tortured with violent pain, and the cheek overflown with a serous or lachrymose discharge ; but in the midst of all these *prima facie* evidences of inflammatory action, we have found nothing beneficial but *corroboration* Here then, we have abundant proof of its neuralgic character. On the other hand the evidences of its connection with marsh fever, are equally striking. 1. It occurs chiefly in the winter and spring, after intermittent fever has been prevalent in autumn. 2. It is almost confined to those who experienced attacks of that disease the fall before, or, sometimes, two years previously. 3. It is, commonly, most prevalent, when those relapses which are denominated vernal intermittents, are most numerous. 4. It has distinctly marked paroxysms, generally, in the Western country, quotidian ; is attended with various constitutional derangements; and the fits continue, about the same length of time, with the fits of an intermittent. 5. It is curable by precisely the same means. Here we have, then, a well marked example of the connection between autumnal fever and neuralgia ; and on this alone we may raise a strong presumption, that many other painful maladies, the ætiology of which has not hitherto been understood, are owing to the same cause ; and thus prepare our minds for pursuing the inquiry, with candour, where ever our author may lead.

A disease so strikingly paroxysmal and maintaining so great an affinity with that under review, as the 'sick' or 'dyspeptic' headache, could not escape Dr. M.'s observation, and accordingly he suggests, that many cases of it are in fact, but varieties of marsh neuralgia. We think this extremely probable. It abounds in the Western country, where the diseases from malaria are endemic; we have observed it to be more prevalent in the valleys, than on the hills ; it often comes on independently of errors in diet, and frequently fails to return in the midst of them ; it is liable to be reproduced by exposure to cold, and the other causes which induce a relapse of intermittent fever ; its phenomena are almost the same with those of periodical head ache ; and the impending paroxysm can

frequently warded off by the same means that arrest the forming roxysm of an intermittent ;—analogies more close and numerous, a have in many other *medical* cases, been thought sufficient to ablish, at least, a generic identity.

Towards the close of the chapter under review, our author indul- s himself in some animadversions on the phrase—'a flow of blood the head.' He thinks it would puzzle those who hold this language explain their meaning. But we shall let him speak for himself.

"Moreover, in Neuralgiæ, every where, and in these headachs, there is an crease of the action of the smaller arteries, as I have formerly shown ; ducing redness, or temporary and transitory inflammation, or else causing anent inflammation, as it does in the "rheumatism of the face :" and further, I shall show hereafter, giving rise to a peculiar ophthalmia, a neuralgic thalmia. Indeed, even in a common headach, where the smaller nerves of e membrane are the seat of the pain, there is increased action, or excitement the neighbouring arteries, as is well known ; extending often even to the ger ones, and even while the heart is unaffected and all the rest of the vas- ar system tranquil. So certain is it that undue arterial energy can be ex- ted by locally disordered nerves, in a single spot, without fulness of blood, "flow of blood to the head," or tendency to inflammation or to plethora, d even in subjects labouring under the most opposite conditions of exhaus- on and debility. With this indeed, under various modes, physic is far too miliar to render it necessary for me to point out the circumstances under ich it happens. Even in these cases, modern fashion is now resorting to s pernicious theory, pernicious in the practice to which it gives rise : when rely no physician really acquainted with disease, would consider that such rtial increase of action in the vessels of the head, was a justification for ood-letting on the ground of a dangerous plethora or misdirection of the rculation.

What the exact nature of this increased local energy of the arteries is, any re than what it is when extending over the whole system in the common termittent, we do not know ; so little do we really know of any thing in ysiology or pathology. One fact here I may however add ; and that is, at in these local cases, it seems often to begin in the extreme vessels, and from them communicated to the larger ones. But whatever it be, and whe- er in these particular cases it extends to the brain as it attacks the exterior all arteries, and even, as I remarked, the carotids, there is no evidence of exciting inflammatory symptoms there ; though we can conceive this pos- ble, at least under a certain form, since it produces this effect on the eye and e membranes of the mouth. If it were even thus, it is not a justification r blood-letting, but the reverse, as it will shortly be proved that all the neu- lgic inflammations are aggravated by this treatment, as is the painful part f the disease itself under all its modes, and as is every chronic intermittent, e its form what it may ; while further, real diseases of the brain, or injuries the nervous power, are here produced by blood-letting, as I have often no- ced already, and shall have occasion to remark again.

But further, if this increase of action of the vessels of the head is suffered take its own course, it subsides within a limited time, or with the local hot age which produced it : maintaining, and proving still more effectually and mpletely, the analogy which it bears to the parallel symptom in the com- on intermittent fever. This would not happen in any other case of diseased, flammatory action, either in the brain or in any other part : and it ought self to be a proof that blood-letting is here unnecessary, (while it is in fact jurious) and that the common theory of increased action or flow of blood, rue as it is in words, is false as it relates to science, in the view commonly aken of it, and pernicious as it relates to the treatment. And as far as it elates to the possible termination of this increase of action in membraneous r "rheumatic" inflammation, which is the only kind of inflammation that

does follow it, I may observe that this event is very rare, compared to the cases where it does not occur, and therefore diminishes the force of even the false arguments in favour of this practice that might be derived from it: while even that inflammation, where we can really prove its existence, is of a peculiar character, so as, almost universally, to be aggravated by evacuating and debilitating remedies, as I shall have occasion to prove fully hereafter. Such is the view that I have taken of this particular symptom or collection of symptoms, now called the "flow of blood to the head:" and if I have noticed it, as was here my duty, as belonging to the periodical headach or local neuralgia intermittent, it seems to me that nearly the same reasoning, with the same practice, applies to all the cases where these symptoms occur, whatever may be their original causes; since, in all, the pathological condition is similar."
264—265.

In conclusion, he speaks of vertigo as an associate of periodical head ache, though frequently occurring independently of it. He thinks it often the consequence of the chronic action of Malaria, or of intermittent fever; and deprecates the practice of indiscriminate blood letting or cupping, which is resorted to, under the theory of sanguineous engorgement of the brain.

The XII Chapter, is on 'Neuralgiæ of other nerves of various parts of the body.'

"It might have been conjectured long ago, and with no very great effort of ability in the art of generalization, that if a nerve in the face might be thus diseased, so might any other nerve; and it does appear somewhat wonderful that Sciatica had not long ago led physicians to this obvious inference, at least for that particular case, had it done no more. And accordingly, if every individual nerve in the body has not been the seat of Neuralgia, it has occurred in so many, even in my own limited experience, that we have no reason to exclude it from any, but have, on the contrary, reason to expect, that whenever the disease shall become generally acknowledged and observed, there will be produced cases of its occurrence in every part of the body, and that such disorders will also be found not less widely and commonly diffused.

With respect to the evidence that the diseases which I am about to point out are truly Neuralgiæ, I may anticipate the further proofs that will hereafter be given, in a general summary, as also such particular ones as any of the remarkable cases here quoted may require, by saying generally, that they are of the same nature as those which have already been treated of on so many occasions. The quality of the pain is the same as in the one or the other of the analogous disorder occurring in the head; while there is neither organic disease, nor inflammation, nor gout, nor any of the other well known causes of pain present to justify it. It is periodical, or transitory, and recurrent, and through long periods of time, even through life: subject of course to those irregularities in this respect which belong to all the chronic intermittents; the nature and causes of which have already been explained. Very often we can trace it to the same causes; and while it is cured by the same general remedies as common intermittent, with the addition of such local ones as are found of use in the Neuralgia of the face, it is exasperated or rendered permanent by that which is equally maltreatment in all those diseases: while also the very pointed evil consequences, produced by the evacuant and debilitating practice, are the very same or exactly analogous to what they are in Intermittent and in acknowledged Neuralgia, whatever be the place of the pain. Further, these pains, or painful disorders, be the situations what they may, alternate with common Intermittent, in the several ways already described as occurring in the local anomalies of that disorder, and in Neuralgia and periodical headach; that is, as whole periods, or as mere paroxysms: while, of course, they are also irregularly intermixed with such affections, as happens with respect to

the whole of the disorders treated of in this essay, whenever they are of long duration, or have become an inveterate habit." 269—270.

The Optic Nerve. Our author has met with one case of this Neuralgia. The patient described the pain 'as if a red hot needle had been passed deeply through the centre of the eye.'

The Testicle. Of this he has seen two cases. In one it was mistaken for scirrhus and the gland extirpated. It was found healthy in structure; and the disease returned in the spermatic cord. The other case was associated with the slight paroxysms of an intermittent. It was cured by arsenic.

The hands and fingers. Dr. M. has met with many cases of this variety. We shall extract his account of one of them.

"Another case has been mistaken for gout, the pain being seated in the knuckle joint of the little finger; while what renders this instance remarkable, there seemed no intermission, or thus at least the patient positively asserted, during a month through which it lasted. It was complained of as very severe, and as occupying the space of a pea, while attended with the usual sensibility of the surrounding skin, but without swelling or redness at any time. This ought, negatively, at least, to have indicated its real character, nor shall I be surprised to hear of many more such cases when this subject shall be better understood. In this instance also, I had an opportunity of remarking the evil consequences of blistering; nor could I indeed have avoided that, since the mistake, like the practice, was my own; this somewhat obscure case having occurred in the earlier days of my investigations on this subject, and long before I was aware of its extent, or of the various appearances of Neuralgia. That I did not cure it by my practice, I am bound to add: but having instantly, in a minute in fact, disappeared on the occurrence of a periodical tooth ich itten led by an intermittent, which I doubt not I had previously overlooked, its real nature became evident; while numerous similar terminations since that time, have left no doubt in my mind respecting its real nature." 274.

The Knee. The profession are familiar with the sympathetic neuralgia of this joint, which attends diseases of the acetabulum. A similar affection is sometimes connected with fever, and ceases when the malady on which it is engrafted, is cured by the usual means. Our author cautions the profession not to mistake neuralgia for scrophula of the knee joint. This affection has often been denominated rheumatic and gouty. Dr. M. has seen one case of five years duration, complicated with visceral disease, which yielded to the bark and arsenic given alternately. In two other instances 'the extremely acute pain was situated immediately over the very edge of the head of the tibia' and the affected part was not more than an eighth of an inch in diameter. There is in this part he observes, no *visible* nerve, and hence we are made to see, that a neuralgia the most intense, may exist in a nerve too small for anatomical exhibition. In another case, 'there was, one day, a pain in both the knees, and, on the alternating one, a pain in one arm,' in which type it had continued a long time, and was called an irregular gout.

The Tibia. Of the neuralgia of this bone, or rather of its periosteum, our author has seen cases which alternated with neuralgia of

the head, and has, also, met with others, in association with well marked chronic intermittent. After stating these facts, he throws out the intimation, that 'nerves are more subject to neuralgia as they approach nearer to the surface of the body'—a suggestion to which we invite the attention of our readers.

The Toes.

"In one instance," says our author, "I have met with a highly marked case of this nature in a toe, arising from, or connected with, an obscure intermittent accompanying a morbid spleen.

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The pain itself was limited to the very end of the toe; but, after some duration, an uneasy sensation, accompanied by numbness, extended along the branch and trunk, even into the sciatic nerve at the hip; while, even when that extended pain had not come on, the patient felt a similar sensation on my attempting to trace the course of these with my finger, along the surface. The cure of this case proved somewhat difficult, though it was at length removed by the means already mentioned; and while for some time it increased in severity, it at length happened that the uneasiness and numbness, after reaching the hip, reappeared in the shoulder, passing down through the ulnar nerve, and affecting the end of the finger of the same side which corresponded with that toe, or the ring finger." 277—278.

The Rectum. Of neuralgia of this part, Dr. M. has met with a striking example, which we shall quote in his own words.

"At the first attack, and for some weeks, it consisted in an occasional sensation like a spasm, apparently situated in the urethra, about the prostate gland; recurring three or four times a day, and causing little uneasiness. Gradually, these sensations increased in frequency, and were attended with a general sense of irritation about the neck of the bladder, very much increased by walking, and at length producing spasms in various parts, with a tendency to an hysterical paroxysm. No apparent fever of any kind was at first present; nor any suspicion of its real nature entertained; while the disorder, not yet strictly periodical, was referred to the urethra and bladder. Very shortly, there supervened a debility, with occasional numbness, in one leg; and it was easy to trace, by the tingling sensation formerly described, the course of the fibular nerve. At the same time also, it was perceived that the mere act of bending the neck forwards, brought on the sensation in the perineum, and further, caused the patient to totter on the affected leg; a circumstance to which I shall have occasion to recur hereafter.

After enduring some weeks in this form, there supervened a febrile state, at first very obscure, but which was, after some time, ascertained to be a double quotidian with a nocturnal and diurnal paroxysm. Still, the nature and the real seat of the pain was obscure; nor was the slightest suspicion of Neuralgia entertained by the numerous medical attendants who in succession examined the case. Such however it appeared to me; and after some further progress, every doubt in my mind, if not in that of others, was removed by the increased regularity of the disease, and by the pain in question becoming as regular as the attacks of Neuralgia are when most perfect. In this state, the first of the quotidian paroxysms was simple, and the second was attended by the Neuralgia, which, now increasing in decision, increased also in severity. In this aggravated state also, it became plain that the primary seat of the pain was in the rectum, the patient describing it as a burning heat, as from a heated solid introduced, which was shortly communicated to the bladder, producing irritation and strangury. When of this severe nature, that irritation extended even round the thighs and over the lumbar region; so that the slightest touch produced great uneasiness, as happens in violent cases of the Neu-

ralgia of the face, and was felt even in the abdomen, as if the whole colon was affected in a similar manner ; which was probably the fact.

Further, during the severity of the attack, all the limbs were affected with spasms ; and very generally there supervened a regular fit of hysteria, with a great degree of general derangement throughout the whole system, consisting of the usual symptoms of a severe remittent in all their worst forms. Lastly, and not to be unnecessarily minute, as the irritation of the bladder appeared to spread along the ureters to the kidneys, there came on diabetes, the diabetes mellitus ; while, when this symptom was peculiarly severe, it was attended with an acute pain in the left, but not in the right kidney, so that possibly this particular symptom was confined to one of the glands only. And respecting this part of the disease, I must further add, that it was rigidly paroxysmal, or that the morbid secretion of sugar commenced with the general fit, and entirely disappeared in the interval." 279—280.

The THIGH. Our author has seen the 'anterior cruval nerve' the seat of this malady, in different individuals. It existed in the trunk of the nerve, at the exact flexure of the thigh, and in its ramifications, as low as the middle of the limb, shooting as sciatica does, and with similar severity, down even to the toes.' After speaking of some of these cases he adds—

"And in another of these cases, where the disease was similarly at the flexure of the thigh, it proved extremely troublesome : recurring during many years, sometimes superseding another Neuralgia, at other times accompanying a marked intermittent of no small severity, while removed either by the usual remedies, or by change of place, or by the supervention of some other mode of the disease." 284—285.

The KIDNEY. It has occurred to our author to see one case of 'pure pain' apparently in this organ. It was attended with no diabetes, and existed he supposes in the renal nerve.

Chapter XIII, is devoted to Sciatica, which has so long been recognized as a distinct and serious malady, that our author thinks it entitled to a separate consideration. After several paragraphs of criticism on the views which preceding writers had taken of this affection, and expressing the opinion that it should be regarded as a true neuralgia, Dr. M. observes—

"It is on this view of its nature, that we can explain the peculiar intensity of the pain ; a pain, both for quality and violence, bearing no resemblance to that of rheumatism. On this view also, we can explain its confined nature, the absence of inflammation, the state of diffused irritation about the parts which attends the fit of pain, the shocks which accompany it, resembling those of all the Neuralgiæ, and its propagation along the course of the nerve. And if these peculiarities are thus explained, so are they the proofs of its real nature ; while similar and further proofs are found in the paralytic affection which so often follows it, and which, as I have already shown and shall more fully show hereafter, is a frequent consequence in all Neuralgiæ, particularly under bad or wrong treatment. If spasms in the adjoining muscles, or throughout the body in general occur in sciatica, so do they in all the Neuralgiæ ; and it is further remarkable that it produces, in irritable habits especially, hysterical symptoms, as do the other disorders of this nature, together with a general irritability, both of mind and body, which seems to belong peculiarly to the painful diseases of this nature.

It is further remarked that the pain of sciatica "breaks down the constitution ;" or that there is a state of general disorder, in the chronic cases especially, which is scarcely produced by any chronic painful disease, not even by gout and stone. This is the condition or change to which I formerly alluded and shall have occasion to allude again, and the cause of which I then explained ; a condition which attends all the Neuralgiæ without exception, when of long continuance. If other proofs of similarity or identity were required, they would be found in its inveterate duration when once established, an inveteracy which has rendered it an incurable disease ; in the inutility or the mischievous effects of blood-letting and local applications ; in its apparently voluntary cessation on change of place or of habits, and in other circumstances, attending the remedies for good and evil, which I need not again repeat, often as they have been discussed for the parallel cases." 290—291.

After dwelling for a short time on the difficulties which are presented to him who may attempt to class this disorder with those from Malaria, he remarks—

"Thus does it appear to me that the character of sciatica is perfectly established as a Neuralgia, or as coming under the division of local or neuralgic Intermittent ; and how important this view is, as to the practice in this disorder, a practice which has hitherto disgraced physic by its failures, I need not say. I do not mean at the same time to assert, what in fact I do not suppose, that it is necessarily the produce of Malaria ; because I have already shown that the other Neuralgiæ appear to arise often from simpler causes, and are assuredly the produce of even local injury in some cases. If in attempting to ascertain what the common nature of any diseases may be, or in arranging any number of varieties under one common genus, or even one common proximate cause, we are to be called upon to find a common remote or exciting cause, this is not the only case, by many, in which we should have to dispute our way through nosological arrangements. Even simple intermittent may, for aught that we yet know, have more causes than Malaria, and it is, perhaps, even probable that it has ; and thus may the Neuralgiæ, and the sciatica among them, be the produce of mere cold or damp, as the latter disease has been commonly supposed to be." 292.

The 14th Chapter is appropriated to "Questionable of Neuralgiæ," in which the author briefly enumerates several painful affections, which, he thinks, further and more acurate observation will class with the neuralgiæ. We shall pass them by.

The next Chapter relates to 'Neuralgic affections of the Glands.' It is equally short and unsatisfactory. He thinks the lachrymal gland is sometimes affected, and likewise the salivary ; but attaches more importance to the idea, that the secretion of bile and urine, is often influenced by a neuralgic condition of the hepatic and renal nerves ; and, even, intimates, that diabetes mellitus, may hereafter be found connected with this condition. The facts, however, are, as yet, but few and equivocal, and, contenting ourselves with recommending the subject to the attention of our brethren, we shall proceed to matters of greater certainty—the Neuralgiæ from injuries of the nerves. These make up the subject of Chapter XIV.

Dr. M. complains of a want of facts to illustrate this variety of neuralgia. He has, however, cited several of an instructive character, and the experience of every practical man might furnish others.

If a nerve be divided with a cutting instrument, a neuralgia is not likely to ensue, for incised wounds and amputations seldom produce it. It is the puncture, laceration, contusion, compression, torsion or stretching of a nerve, which is, generally, followed by neuralgic disease. This is sometimes in the part affected, at others above or below it. A considerable degree of paralysis is often the consequence. Sometimes, at a remote period, a paralysis agitans ensues, or, about to establish itself in the system, commences, in a part formerly injured. A reduction of temperature and feeling, with a decay in the size of the limb or joint affected, is a frequent consequence of injuries of this kind—of which we have seen striking examples, in the hip, knee and ankle joints. In some instances, the injured part swells and becomes considerably indurated, but does not suppurate. We have, at this time, a patient affected with neuralgia of the great toe, which is nearly twice the size of the former. It was caused by a bruise, and has lasted three years. When the patient is dyspeptic the pain is generally much worse. At times it is replaced, by gastrodynia, or neuralgic pain in some other part. In some persons, there seems to be a predisposition to neuralgia, when it follows the slightest external injury, and occurs in various parts of the body. We have met with several examples of this kind, some of which were, clearly, the consequence of autumnal fever; affording additional evidence of a relation between that disease and neuralgia. Our outhor has met with cases of this malady which assumed a distinct quotidian character. We shall extract one of them—

"In the next case, the injury was a blow on the arm, producing a severe bruise, a fact however which was only discovered by cross-examination, as a regular Neuralgia of a quotidian character was established long before I saw the patient, who was also a young woman. In this instance also, I was led to inquire respecting previous injury, from having long suspected that it was not a very unfrequent cause of Neuralgia; and the information was satisfactory, inasmuch as the disorder was distinctly stated to have followed the bruise after two or three days. It was remarkable however that the seat of the neuralgic acute pain, which was in the middle of the radical nerve, and which extended in the usual manner to the shoulder, was not at the place of the injury, but considerably distant from it. While under cure, this case of Neuralgia lasted long enough to enable me to ascertain personally its perfectly regular character, and, as in the preceding case, that cure was effected by arsenic." 308.

The excessive pain attendant on Corns, is manifestly neuralgic, as well as that produced by certain ulcers. The former never occasion suppuration, and in the latter, the secretion of pus is always imperfect, when the surrounding parts become neuralgic and irritable.

Tooth-ach, is the subject of the next Chapter, which runs through nearly 40 pages. In the opinion of our author, 'every tooth-ach is a neuralgia, be its forms whatever they may.'

"The heads under which toothach is divided, may, for the present purpose, be conveniently rather than correctly, assumed as the following: but they are very indefinite divisions, as they run into each other, and, as individual cases, present endless modifications.

It may be rigidly periodical: while, in this case, it may be either combined, or not, with chronic intermittent fever: and further, in this case also, a tooth, or teeth may be sound, or carious, this condition being here considered incidental, not essential. Or, it may be irregular in its paroxysms, under all the same variations; and in both of these varieties, it passes into the common Neuralgia of the face; or, cases occur in which either name is equally applicable. This is the periodical toothach so familiar to those who have paid the attention to this subject which it deserves, but which is so very often overlooked, not merely by the physician, but very generally, if somewhat more remarkably, by the patient; as, by the former, its passage into highly marked Neuralgia seems equally to have been neglected, and most so when a carious tooth is present.

In these forms, it is here considered as spontaneous Neuralgia: while, in the next place, it may occur, either casually, or more regularly, that is, under all the variations of that general disease, and traceable in a marked manner to a carious tooth; the pain being fixed in the nervous branch by which that is supplied, or originating in that and spreading from it. In this form it is here referred to Neuralgia arising from an injury to a nerve.

Further, as happens in cases of common Neuralgia, the excitement of the minuter vessels may be such as to produce temporary and paroxysmal, or, more permanent inflammation in the membranes, or generally about the face; when it becomes rheumatic toothach or rheumatism of the face, (neuralgic inflammation.) The chief varieties here, are produced in the following manner. The general (rheumatic) inflammation may, as I have just suggested, be paroxysmal and periodical, and even regular, or it may be permanent; while it may attend a carious tooth which is pained, or free of pain, or else a sound tooth in a state of pain; and such pains under any mode of regularity or otherwise. It may also be accompanied by a neuralgic pain independent of the general pain of the inflammation, and not in a tooth; in which case, it is plain, it belongs most unquestionably to Neuralgia, though, in the usual practice, ranked with toothach.

Or, lastly, all other pain but that of the inflammation itself may be wanting; when it becomes, most strictly, what is called rheumatism of the face: this state also sometimes occurring, even without the presence of a carious tooth. If this rheumatism of the face with separate neuralgic pain should in correctness have been ranked under common "Tic," the last division, also, in a more scientific arrangement, should have been reserved for a distinct section: but its obvious affinities and the received usage render it convenient to include it in the present one; particularly as its limits with respect to the former varieties are indefinite." 319—328.

After dwelling for some time, on the causes which introduce great irregularity into the attacks of tooth-ach, our author proceeds to trace its analogies with neuralgia and intermittents.

"In numerous cases of common toothach, in every well marked and severe one at least that I have ever had proper opportunities of examining, I have never failed to trace one or more of those symptoms which attend simple intermittent; that is, indications, varying in number and degree, of a febrile paroxysm: and while those symptoms have been, in general, particularly, discernible in the chronic cases, or where toothach had become an often recurring habit, I have found ample reason to believe, that, wherever the disease has persecuted the patient through a long life, the visceral glands have been affected; or, that however irregular, it has, like the irregular and chronic intermittent, been associated, whether as effect or coincidence I have already

declared my uncertainty, with derangements of the liver or spleen, or both, but most frequently of the latter. And in some cases, this connexion has been so obvious, that while the patient was habitually suffering under a palpable or a grievous chronic intermittent, the irregular toothach has been associated with the disease in all the ways in which the periodical one is, or in the exact modes already pointed out as to the several Neuralgiæ.

And I have here a collateral remark, which is of some importance; while I alluded to the same fact as to Neuralgia in general, on a former occasion. It is frequently mentioned in medical writings, that the pain of toothach, when recurring severely for many years, destroys the constitution; and this effect has been attributed to the severity of the pain. The constitutional disease here alluded to, is, doubtless, great; but, as I formerly hinted, it is not produced by other pains, nor is there any thing in pure pain to account for the species of injury in question. This is one of the errors, far too common in physic, which flow from a minute or petty attention to an obvious symptom, to the neglect of generalization. In these cases, the constitutional disease in question will invariably be found to be a chronic intermittent, sometimes united to visceral affection, and to be thus, rather the cause of the toothach than its effects; the former being, at least the great disorder, of which the pain is but a portion or a symptom. And should the toothach destroy a patient, or shorten his days, as it is said to have done, it is easy to see to what causes such effects are to be attributed; while such erroneous and trifling judgments in cases of such a nature as this, are even more unpardonable. But I must withdraw from a criticism which, did I pursue it, might involve a censure on many to whom I must look with respect on other points, however they may have suffered themselves to be misled on this one, by following, from habit, minds inferior to their own.

The general nervous affections which attend common toothach, are the same as those which occur in all the Neuralgiæ, and, similarly, in all the intermittents, whether simple or anomalous. It is remarked, even to familiarity, that the pain of toothach is peculiarly intolerable, or affects singularly the whole body, and the mind also; while, as far as pains can be measured or compared, it is not equal in quantity to that of wounds, or of various painful diseases, which do not equally affect the system, or are not equally intolerable and not thus productive of irritability and impatience. Under many severe pains, the mind retains its full powers; and when the pain ceases, the inconvenience is over; while the former is rarely the fact in the toothach, and still more rarely so in the habitual one. This is precisely what occurs in every case of Neuralgia, be it whatever it may; and hence do the general sufferings, often undescribable, from periodical headach, Tic, or sciatica, resemble those which occur in severe toothach.

It surely must have been remarked by every one, that the physiognomical expression of a person labouring under toothach is peculiar, and unlike to that which occurs from gout, or the pain of wounds, or almost any other pain. Yet it is the same as that which takes place in Neuralgia, as an artist at least will immediately discover; and what is more, it will be found to resemble, in an air of peculiar anxiety and of melancholy, united or separate, as also at some periods, in a paleness and shrinking, and a peculiar greenish yellow or singularly sallow colour, that expression which characterizes the fit of intermittent, as I have more than once remarked respecting the Neuralgiæ in general.

To the peculiar situation of the pain, in the body or substance of a nerve, and communicating with the whole nervous system, we must probably look for these peculiarities, whatever the exact cause may be; and thus the toothach is also often attended by hysteria, even amounting to a fit, by lacrymation, or a tendency to it, and by a species of debility of mind, equally remarkable in every Neuralgia, and, in fact, in all the intermittent diseases under whatever form. Where dyspeptic and hypochondriacal symptoms occur in patients subject to habitual toothach, as is by no means unusual, the explanation becomes thus easy: and thus also we can explain, how it so often happens in females, that this disorder, when frequent and durable, is attended by men-

strual derangements. In reality, in every patient subject to frequent and severe toothachs, there is a great deal of general disorder of various kinds; and it can always be traced, with due care, to a separate, if, in a certain sense, connected constitutional disease, which is that variety of remittent or intermittent amply described in former parts of this essay.

There is yet one familiar fact occurring in toothach, which also connects it with Neuralgia and intermittent; and though it may appear trifling as a proof of identity, it is too remarkable to be passed without notice. It is removed by charms, a practice not uncommon in remote parts of the country: and thus it is also that the sight of the operator or of the preparation for extraction, often puts a stop to it, and when not habitual, even permanently. Thus also it is frequently cured by change of place or habits, as it is removed by the occurrence of another disease or pain: remedies, all of them, which occasionally, and perhaps as often, produce the same effects in other Neuralgiæ and in intermittents."

If, occasionally, the pain is confined rigidly to one tooth, a fact, however, which occurs chiefly where the tooth is carious and the disease is the produce of local injury, it is much more common for it to extend beyond that. Thus, like the Neuralgia elsewhere, the severe pain will be in one point, of greater or less dimensions, while a more moderate pain extends along the courses of the nerves, even to great distances. And in some cases, where the chief pain is not particularly pungent, the secondary one may be such that the patient can scarcely say where it really does lie; while, further, it is subject to wander about the face, or to be most intense at times in one part and at others in another. Thus does common toothach, like Neuralgia, often pass into headach; as, further, the patient may be so equally occupied between headach and toothach, as not to know precisely by what he is most grieved. In such cases as this, nothing but inveterate habit and inattention, added to the weight of a name, to that which is always the most weighty argument to the multitude, could prevent practitioners from referring the disorder to Neuralgia instead of toothach; had they indeed known what Neuralgia itself was.

It is not uncommon for the disease, the Neuralgia, to be situated in one or more of the leading branches which supply, by their minuter ramifications, a number of teeth. In this case, the pain may actually extend into many teeth, or to one half of a row, in either jaw, or in both jaws, or to the whole row, in either, or even in both jaws; though cases where it occupies more than the whole of one row are rare, while this accident seems to occur more frequently in the upper than in the lower jaw. It may also, in this case, affect but two teeth, or even one; or, in such a case as the last, there may be a neuralgic pain of the cheek or face, with a decided toothach superadded, in a single tooth, which, in the present inquiry, I shall presume to be sound."

I showed in a former part of this essay, that the local injury of a nerve could produce a regular periodical Neuralgia; while I further suggested, what indeed is almost obvious, that the irregular pains produced by such a cause ought also to be considered of the same nature. Now these are cases exactly analogous to the toothach from a carious tooth; and thus we can see, how, from such a cause, even a periodical toothach might be produced. The extremity of the ramification supplying the tooth is, if not an injured nerve, an exposed one, susceptible of occasional injury, and also, it is probable, of inflammation: while it is not very improbable that the exciting disorder in the nerve in every case, the permanent cause which produces occasional fits of pain, is, if not a species of inflammation, something analogous to it. Hence, if the prick of a needle in the finger, or any other injury, can excite true Neuralgia, in the same or in a distant part, as I have shown that it can do, it is easy to imagine how, not only simple toothach of the part, but even Neuralgia in the face, may be produced by a carious tooth."

Carious teeth do not invariably produce toothach, far from it; even when we are sure that the sensible parts are equally exposed, and when the proof of this is perfect, from the pain which an injury, or the contact of a stimulating substance produces. So far from that, we find thousands wasting away through years, and with the sensible part exposed the whole time, and yet without

exciting pain ; while, when excited, even violently, by accident or design, for a few minutes or hours, it terminates, not to recur again but from fresh injury. The most common reasoning should therefore show, that the disease does not essentially consist in such exposure or injury, but that something else is present, and that this is but an occasional cause. That fundamental cause lies in the nerve, or the nervous system, as in all Neuralgiæ." 330—345.

These extended extracts will sufficiently make known our authors views. He proceeds now to treat of the cure of this variety of Neuralgia, but our limits will not admit more than an abstract of the cure of neuralgia in general, at which we shall presently arrive.

In the conclusion of the Chapter, Dr. M. speaks briefly of rheumatism of the face.

"I formerly showed that it was a frequent effect of Neuralgia to excite an action in the minute arteries, tending in some cases to inflammation, and as I shall hereafter show, sometimes actually producing it. I have further compared, and must for the present purpose compare, again, that action of the arteries in a part, to the effect which takes place, of an analogous nature, in the whole arterial system during the paroxysm of intermittent.

Supposing a carious tooth to be present, there are two modes in which the rheumatic inflammation may occur. If the pain has commenced in the tooth, the inflammation may be determined or produced by that ; and we may then conceive it as the produce of the Neuralgia in the main nervous branch supplying the tooth ; an excess of that action which so generally occurs in the neighbouring vessels in every Neuralgia. But the rheumatic or inflammatory action may also be the prime or leading disorder, while the pain of the tooth is produced by its extension. In this case we may compare it with the local rheumatisms formerly described as connected with intermittent, of which it is in reality a frequent variety.

If, on the other hand, there is no carious tooth, the rheumatic inflammation in question bears still more strongly the marks of an original disease, while in this case, its characters and origin are those just described. And here, if it is most generally a simple disease, a merely painful state of the membranes of the face, attended with inflammation and swelling, or not, it sometimes also excites a distinct neuralgic pain in addition, or else appears to originate in one ; such cases being exact parallels to those just described where a carious tooth is present." 346—347.

With these copious extracts, we had intended to close this part of our analysis, but are tempted to transcribe a condensed view of the whole argument of the chapter, inserted near its close ; inasmuch, as it presents the subject in a clearer manner than the preceding paragraphs, and shows that our author *is* capable of writing with conciseness.

"Neuralgia is a pain occupying some point in the nerves of the face, among others ; and it may occupy any point in any large branch which supplies the teeth, among other nerves of the face. The pain which it produces is the same pain, whatever be the nerve or part of that nerve affected. The pain of toothach is the same pain, and it is seated in an ultimate extremity of the branch which supplies the teeth, or in more. If that pain is not Neuralgia, then it must follow, that although every other point of that nerve, when pained, is suffering from Neuralgia, let that pain exist any where, from the brain even to the extremity, the very last, ultimate, point thus suffering, suffers from a different disease. Reductio ad absurdum.

Neuralgia is regularly intermittent and periodical, or it becomes irregular under various modes, and from causes, of which many are assignable. The same is true of toothach. Neuralgia is often, or perhaps generally, attended by a peculiar constitutional affection, ascertained to be a chronic intermittent, and when highly marked, there is a febrile paroxysm accompanying the pain. All this is true of toothach. Neuralgia alternates with intermittent fever, by relapses ; so does toothach : it alternates with it by paroxysms, and toothach does the same. And in both, the types may be quotidian, tertian, and double tertian, or perhaps more ; while, in both, the disease may be similarly doubled ; or, being a double tertian, may consist of a paroxysm of the pure intermittent on one day, and of the Neuralgia, or of the toothach on another.

Neuralgia is attended by heat, and by excitement of the minute arteries, accompanied by general diffused pain, or irritability, or both ; and so is toothach. Neuralgia and toothach are united, or simultaneous ; or, the pain, and the place of the pain may be such, that neither the physician nor the patient can determine what the disease ought to be called. Neuralgia passes into, or produces toothach ; and, reversely, toothach passes into, or produces Neuralgia. The two pains alternate, in various modes ; or that which was Neuralgia at one period, be that of day, hour, or minute, or even instant, may be toothach in the next ; or the reverse.

Neuralgia is produced by the injury of a nerve. So is toothach ; and this is the case of a carious tooth. And if toothach from this cause is especially frequent, it is that the caries of a tooth is very common ; and that there are not, in external circumstances, or in the body, any frequent means of thus injuring, either through accident or disease, the branch of a nerve elsewhere." 350—351.

From Neuralgia of the teeth, Dr. M. proceeds, in the 18th Chapter, to neuralgia of the eye—which he denominates neuralgic ophthalmia, and rheumatism of the eye. His leading object is to prove, that what is called rheumatism of the eye, is at once neuralgic and miasmatic. The following is his description of this malady.

"There is a peculiarity in the aspect of the inflammation itself, far easier to recognise than to describe, and by which alone it is generally distinguishable, even at a distance, and on a mere glance, to those who have acquired that experience which in other cases is called the *tactus eruditus*. I have sought in vain for expressions to say fully what this is ; but I believe it to be as useless as difficult, since, however accurate they might appear to those who already know this inflammation by sight, they would not teach others to know it, inasmuch as no visible object can be justly described to the previously ignorant ; while such a description would be useless to those who are already experienced in this ophthalmia. The more obvious character, however, is a dull, rather than a lively red colour, not unfrequently attended by a tinge of yellow ; the cause of which is especially visible in the sound eye when but one is inflamed, and the source of which must now also be obvious, particularly in autumnal cases. This inflammation occupies the whole conjunctiva, even to the verge of the cornea ; and while the redness is rather produced by the minutest branches of the arteries than the larger ones, the general aspect is almost that of an additional coat of red cloth in the severer cases, sometimes attaining a higher level than that of the cornea.

In severity, however, it differs exceedingly from a mere general, and somewhat pale redness of the conjunctiva, to that violent inflammation just noticed. Here, it is apt to resemble the celebrated contagious and purulent ophthalmia ; but it can nevertheless be distinguished by attending to its progress and to the collateral symptoms, while it never, as far as I know it, suppurates on the surface, like that disease. This is a part of its history, however, on which I must yet speak with some hesitation ; as, after many years of observation, whence I concluded that it never did suppurate, my opinions have been

recently shaken by one or two cases, though I had not the opportunity that was necessary for satisfying myself as to the real nature of the disease in these. Whenever it shall, as a separate disease, have received from physicians the further attention which it requires, this, and some other circumstances, which I cannot now well elucidate, will be better understood, while I shall gladly avail myself of such information : though it will be necessary that this disorder shall be truly discriminated for this purpose, lest we return into worse confusion than that which I am attempting to rectify.

Such is the general and obvious character ; while I shall reserve some rarer particulars for consideration immediately. But there are one or two remarkable circumstances respecting it, too characteristic to be passed over. It is often unattended by any pain in the eye itself ; and this seems particularly the fact where it is of long standing, and not very severe ; though there are cases also in which it is accompanied by as much pain and irritation as the common, or even the contagious ophthalmia. And in such mild chronic cases also, there is, sometimes, not even irritability to light ; so that, with the exception of the occasional feeling of dust or sand, it will often last for many months as a mere deformity ; the patient, if in low life especially, not applying for advice. It is also a peculiarly obstinate species of ophthalmia ; continuing unchanged, even for months, in spite of every ordinary means of cure, particularly resisting local applications, and, as I shall presently show, very commonly aggravated, and in a very marked manner, by the evacuating system. Wardrop has also remarked that there is, at the commencement, a peculiar sense of dryness in the eye, while that is at length followed by abundant lacrymation. If I cannot say that I have very decidedly noticed the first of these symptoms, it is probably because of a well-known usage, in consequence of which, physicians rarely see the commencement of a disease, as, with respect to the lower orders, is true of almost every member of the profession ; but I can bear abundant testimony to the lacrymation, while its exceedingly remarkable nature is explained, to me at least, on those principles already stated in speaking of the neuralgic affection of glands.

When there is no pain in the ball of the eye, it would seem that the conjunctiva alone is affected ; while, when irritability to light attends, we must suppose that the neighbouring vessels, and nerves, within the eye are in that state, be it from sympathy or extension, which so often occurs in the rheumatism of the face and in common Neuralgia, where, added to the decided inflammation and pain, there is an excitement, a tenderness, or an irritability in the adjoining parts. It is not necessary that the eyelids should be affected, or that the inflammation of the conjunctiva of the eye should extend over that of the eyelid ; though this happens in the severer cases, and, as it would seem, rather in the acute than the chronic ones. It is a fortunate circumstance, that this inflammation is so much and so often resisted by the transparent cornea, as is the fact also in some other ophthalmias, but abundant instances of this do nevertheless occur rigidly speaking, and in the severer cases, the cornea becomes dull ; and if this opacity proceeds, it at length forms a cloud or a spot which diffuses itself over the whole eye, while it is more condensed in the centre. Fortunately, even when very considerable, this commonly disappears, under proper treatment of the general disease, and even within a day or two ; while I have seen it return many times, under different relapses and in successive seasons, without any more permanent effects. In such cases, also, it will sometimes be found, by means of a lens, that there is an ulterior disorder of the cornea, resembling very superficial ulceration ; equally disappearing, and without bad consequences, with the general inflammation. Far more rarely does it affect the iris ; but cases even happen, as I shall soon show, where that membrane alone is the seat of the disease : the neuralgic affection producing here a rheumatism of the iris ; to adopt the common phraseology.

Supposing that the inflammation, thus complete or severe, has not been cured, or, as is the fact, has been neglected or maltreated, the ulterior unfortunate terminations may be as follows : In the acuter cases, the ulceration of the cornea may increase so as to perforate it, in which case the eye collapses, commonly for life ; though this is sometimes healed, with a partial or perhaps

entire restoration of the figure at least of the eye-ball. In still worse cases, matter forms within the globe of the eye, and it bursts; and I much suspect that the cases of single eyes thus lost, which are not uncommon, might all be traced to this particular disease. In what may be considered acute cases also, if less severe, a pustule, or minute abscess, is sometimes formed in the cornea, inducing, of course, blindness; and further, in these, this portion of the eye will become permanently opake, while opacities are the frequent terminations of the chronic cases, misunderstood and maltreated. I shall be much mistaken if the very great majority of cases of opacity in one eye, as well as not a few where both are thus affected, have not arisen from this, the most common assuredly, of all the varieties of ophthalmia, though so little suspected, or rather so nearly unknown: since the essay of Wardrop, correct in the practice which it points out, seems to have produced little effect on the mass of practitioners; while if it had, from not distinguishing the chronic forms, it leaves those persons still in the dark as to the predominant cases of this ophthalmia.

The neuralgic ophthalmia sometimes attacks suddenly, and appears within a few hours, in all the perfection which it is about to preserve; but it is often also preceded by an intermittent or remittent febrile state, sometimes so slight as to be overlooked, not only before the disease, but during its continuance. And, as far as I have observed, some symptoms of this are always present; though it is very seldom that we can ascertain that it has preceded, because the patient has paid no attention to a disorder so slight. On other occasions, it is the sequel of a previous distinct neuralgic pain, which sometimes lasts even a long time before the inflammation comes on. That neuralgic pain is also, as the precursor of this ophthalmia, most commonly seated in the face, and very generally in the eyebrow or the temple, though sometimes even in the lower jaw; being, in many cases, a common hemicrania, or a periodical headach of some kind, or a clavus; though I have seen cases also, where it has been situated in even more remote parts, such as the arm. Further, this previous disease will occur as a rheumatism, in perhaps any part, or even as general or diffused rheumatism: the ophthalmia following it, perhaps being continued from it, or else appearing as a replacing disease. All these circumstances mark distinctly its connexion with intermittent and with Neuralgia in general: and when it replaces another rheumatism or another Neuralgia, this is precisely what occurs so often in the anomalous intermittents as they were formerly described." 358—361.

We have met with many cases of the disease here described. A recent instance may be mentioned as an example of the whole. In the winter of 1828–9, a man applied, at the Cincinnati Eye Infirmary, with ophthalmia. Both eyes had a uniform redness, with but little discharge or tumefaction. It had come on without any obvious cause. On inquiry it was found that he had experienced an attack of ague and fever in a neighbouring town, the preceding autumn. It was found necessary to resort to the bark. In 10 or 12 days the complaint vanished, leaving no trace of its existence. Next summer he was siezed with excruciating pain in his feet, which affected, successively, nearly all his joints (till it reached his head) in the form of a true inflammatory rheumatism, which after venesection, emetics, cathartics and digitatis required, as before, a resort to the bark.

It is well known that ophthalmia is an endemic of the Western country. Our earliest recollections connect themselves with this painful malady—peculiarly the disease of children of every age.

We have ourselves experienced it, more than in our boyhood, and remember to have seen whole families afflicted with it at the same time. It has always been worse in the country than in the towns, at the period, however, in which it prevailed most, the West had no considerable towns. Of its connection with autumnal fever, there can be no doubt. Twenty years ago, the writer of this article printed and distributed a little work, entitled '*Notices Concerning Cincinnati*,' in which the miasmatic origin of this malady was insisted upon, for reasons which are, perhaps, not unworthy of a more permanent record and a wider dissemination.

"Ophthalmia. On the arrangement of this affection among the miasmatic diseases, it is by no means intended to insist. The following are the reasons for which it was referred to that head, and physicians can estimate them, as they deserve. 1. The ophthalmia is an endemial disease of this country, which like our other endemics, appears sporadically every summer, and occasionally becomes epidemic, affecting great numbers, especially children. 2. It occurs as much, (if not more,) along our water courses, and in the depths of forests, as on open plains or uplands ; and therefore neither dust, nor reflected light, has any agency in its production. 3. When epidemic, it appears and declines about the same time, with our other summer miasmatic diseases. 4. It has been prevalent before the annual burning of the woods, which invariably takes place in some parts of this country, and therefore is not occasioned by smoke. 5. In the summer of 1807, I was assured of two cases, in which this disease alternated with cholera infantum ; the ophthalmia prevailing at night, and the cholera infantum in the day. Similar cases have been mentioned to me by Dr. J. Canby. 6. This disease has diurnal exacerbations. It is generally worst at night, even where the eyes have not been exposed to the light. In one case, the subject of which (a man of veracity and observation) communicated the account to Dr. Este, of Hamilton, it assumed a tertian type. During the paroxysm, which had about the length of a common fit of fever and ague, light and every exertion of the eye were intolerable ; but during the intermission, he was entirely free from those morbid sensibilities. The same physician has also lately met with a case in his practice at that place, in which ophthalmia had true tertian paroxysms 7. Topical applications are seldom adequate to the cure, and means calculated to operate on the general system, must be resorted to in all violent cases. 8. It is somewhat difficult to conceive, how, either directly, or through the medium of the general system, the action of miasmata can be concentrated in the eye ; but there does not appear to be in it, any physical impossibility." 48.

We are enabled to state, that observations continued down to the present time, have but served to confirm the conclusions which our early experience suggested, and which at *that time* we supposed to be new. Within the last three years, a great number of patients afflicted with chronic ophthalmia, have applied at the Eye Infirmary ; and afforded, by the histories of their cases, abundant evidence, that

this disease is, in general, dependent on the same cause with autumnal fever.

In the following paragraph, we entirely concert with our author

"I formerly showed that the intermittent hemicrania sometimes affected one eye; so as to produce lacrymation, and also a daily habitual inflammatory state of the eye. It is but to suppose this augmented and rendered more permanent, and we have the ophthalmia in question; it is but to suppose the intermittent overlooked, as it most generally is in this state, and the ophthalmia will appear the sole disease, as every Neuralgia does to those who are equally inattentive. And that this is possible, is proved by the rheumatic or neuralgic inflammation of the face or jaws. The disease here may be mere pain, it may be pain with temporary or slender inflammation, or it may become permanent inflammation; and moreover, it may also terminate in an abscess; a fact, further, which occurs, if rarely, in the eye also. The analogy is perfect, as the cause is the same; while we can find remoter, though not less instructive analogies, in the local and periodical rheumatisms of various parts, attending intermittent, where there is equally inflammation; similarly variable in severity and duration, similarly periodical, and similarly transferrible, or interchangeable with other disorders of the same generic nature, or with those which attend anomalous intermittent." 365.

Passing from the anterior to the posterior part of the eye, Dr. M. enumerates amaurosis, among the consequences of the malady under consideration.

"To return. The other suggestions relates to Amaurosis; and it rests similarly, on some partial observations, in the first instance, but is better supported, both by analogy and an examination of recorded histories. The general analagy of all the Neuralgiæ tends to show, in the first place, that such is not an improbable event as the consequence of this disease, whether flowing immediately from improper treatment, or from their general tendency towards palsy. And if it is easy to understand how a paralysis of the retina might follow in any case where, in this ophthalmia, the neighbouring nerves had been affected, it is particularly obvious how it might be the termination of the simple Neuralgia of the optic nerve formerly described.

Again, to derive another analogy from intermittent fever, since the value of those has often been here demonstrated, I formerly noticed from authors, two cases of Amaurosis connected with that disorder; suggesting then a possibility respecting its cause, which I must nevertheless, in some measure repeat here. They are, in any view, valuable as to the history of this hitherto almost incurable, and much neglected disease: and though to be ranked with the primary palsies arising from Malaria or intermittent, they will at least confirm the possibility of its also arising more indirectly, from the cause which I am here contemplating; since this is, again, one of those involved cases of local and general action which are so difficult to separate, and which never cross me without causing me to regret that I have been here obliged to separate them." 370—371.

We have now under our care a countryman, living where ague and fever is annually epedemic, who was siezed last winter with periodical headach, in and about the right orbit, which speedily terminated (before we saw him) in perfect amaurosis of that eye, with dilated

pupil. After blood letting ond cupping, he took the bark united with jalap, with great advantage as it respects the neuralgia, and his pupil is nearly reduced to its natural size, but no return of vision has yet taken place.

We consider the Chapter now under review, as one of the most important in Dr. M.'s work ; but our limits do not admit of a further analysis.

Chapter XIX, contains a view of the connexion between neuralgia and intermittent. We shall only extract the summary of analogies and identities with which it closes.

"The abstract in question is therefore the following, passing over the community of remittent and intermittent fevers, as an admitted fact. Intermittent fevers arise from Malaria, certainly, as principally, and from mere cold possibly ; but are renewable by mere cold, when once they have existed.

They are often attended by peculiar local symptoms producing the anomalous varieties, while, when the febrile state is slight or obscure, these local disorders appear to be the chief disease.

Such local disorders are either affections of the nervous system, or of an inflammatory character, and they have been fully described.

The same intermittent fevers, more or less distinct, are accompanied by all the Neuralgiæ that have been described, whether these consist of simple pain, or are attended by inflammation ; and when the febrile state is slight or obscure, those local affections appear to form the chief disease.

If intermittent fevers alternate with all the anomalous local symptoms or diseases, so do they with all the neuralgic diseases : and in such cases, the supervention of one is the removal of the other.

Thus also, all those local diseases, including all the Neuralgiæ, alternate with each other ; or the appearance of one form is the cure of a preceding one.

Many of the Neuralgiæ will exist almost simultaneously, or else in alternating paroxysms ; these having any of the types of intermittent.

They also exist in alternating paroxysms with simple intermittent : or a particular doubled type will consist alternately of a paroxysm of pure fever and a paroxysm of Neuralgia.

The same individual under a persevering intermittent, will experience many of the anomalous forms of that disease, and also many of the neuralgic diseases, in alternation or succession ; or else in union ; and, in such cases, the type, and the hour of recurrence, will be the same for all the forms, even through a long course of years.

Malaria will produce the neuralgic diseases directly, as probably, will mere cold ; but they are renewable by mere cold when once they have existed ; and in these cases, though the intermittent fever is probably always present, it may be so slight as to be overlooked. In this, the first cause, Neuralgia, in all its forms, resembles intermittent : but it differs, inasmuch as it can be excited by direct injury of a nerve ; a difference, however, which is of no moment as to the general identity, because we know of no means of thus injuring the entire nervous system so as to produce general intermittent.

The same Malaria, in the same spot, acting on different individuals at the same time, will produce either intermittent or Neuralgia, and every form of each.

Intermittent and Neuralgia, in all their forms, are cured by the same remedies, and injured by the same wrong treatment ; and those remedies are con-

stitutional ones, whether the diseases be local or general; while, very particularly, the local and the general diseases both, are cured by operations on the imagination.

The conspicuously wrong treatment for all of these diseases, whether Neuralgiæ or intermittents, consists in the debilitating practice, as the right treatment is found in what is esteemed the reverse; and whatever be the disease, be it local or general, when that practice is pushed so far as to become injurious, the injury is always of the same character, affecting the entire nervous system." 394—395.

The 20th Chapter is on 'Certain consequences of Intermittent or Marsh Fever and Neuralgia.' It contains nothing particularly new, or which is not a deduction from what has been already set forth, we shall, therefore, pass it over, and enter on the treatment of Neuralgia.

This is the subject of Chapter XXI, of which our limits will permit us to give but a brief abstract; which, however, we regret the less, as the chapter is nearly a second edition of that on the cure of intermittent fever.

Like chronic intermittent, neuralgia often subsides spontaneously, and is, also, sometimes cured by charms, and other means which excite the imagination or feelings of the patient. It is to be regretted, however, that but little reliance can be placed on this *methodus medendi*. When the patient resides in an unhealthy situation, a removal should always be advised. Stimulants and narcotics, when the disease is regularly paroxysmal, if taken in anticipation of the fit, will frequently ward it off. But, in the opinion of our author, the latter class of medicines cannot be regarded as curative. In this decision, we entirely concur; and would refer our readers to the history of an obstinate case of neuralgia, reported in the first number of this journal, in which nearly the whole catalogue of powerful narcotics were administered without effect, but rather to the injury of the patient.

According to our author, the true remedies for neuralgia are the tonics; of which the bark and arsenic are the most important. In the treatment of intermittents, he gives a preference, as we have seen, to the former, but in neuralgia, he has found arsenic more efficacious. This, in fact, is his *great* remedy; though in confirmed and protracted cases, he admits that it frequently fails. He thinks it superior to the carbonate of iron, which however, he would not wholly reject.

When tonics prove ineffectual, it is frequently owing to one of two causes,—first, the extreme irregularity of the paroxysms; and, secondly, the long continuance of the disease. Under these circumstances, he has known a single blood letting, an emetic, or a gentle salivation, especially when accompanied with a change of residence, so to act on the disease, or the constitution, as to render tonics effective in completing the cure.

In local applications, Dr. M. has very little confidence. He has seen but slight benefit from narcotics, thus applied. Of the salts of morphia he says nothing. It appears, however, that they have recently been found serviceable, when sprinkled on a blistered surface, after the removal of the cuticle. Publications to this effect have been made; and we have been informed, by our ingenious friend, Dr. La Roche, of the North American Journal, that in several late cases he has directed this practice, with advantage. Blisters, near the affected nerve, our author has, uniformly, found to aggravate the pain; but they have, occasionally, done good, when applied to a part somewhat remote. Nearly the same remark is applicable to issues and setons. Electricity and galvanism, he thinks, still less entitled to attention, having never seen them do the least good. The only topical application which he has known of advantage, is steam directed upon the affected part, through a tube,

Such is the catalogue of our authors remedies; which are followed by another of prohibited measures, a knowledge of which he thinks equally important. We shall briefly enumerate them. Excision of the affected nerve, he totally proscribes, as unphilosophical, unsuccessful, and cruel. Blood letting, cupping, and leeching he regards as generally useless, and carried to much extent, highly pernicious. Purging he views with equal disapprobation, and ridicules it as a 'fashionable folly.' Finally he eschews a low and bland diet, and advises the patient to live generously.

Such is the outline of Dr. M.'s *methodus medendi* in neuralgia. His confidence in its efficacy is great—rather too great, we apprehend. The well known influence of bark and arsenic in intermittent fever, taken in connexion with his *opinion*, that neuralgia is but a form of that disease in a chronic state, rather than practical experience, seem to us to be the foundation of this confidence. Certain it is, at all events, that both bark and arsenic have frequently failed to cure or even mitigate neuralgia. In the first number of this journal, already

cited, we have published a case in which stimulants and tonics, both vegetable and mineral, were administered profusely without avail, after which the disease was signally mitigated, though not entirely removed by low diet, and the loss at different times by a hundred ounces of blood—most of which was sizy. We have, moreover, seen other cases, in which the same practice was beneficial—we cannot say absolutely curative. From such facts we are inclined to believe, that blood letting and other antiphlogistics are often necessary as preparatives in neuralgia, as we know they frequently are in intermittent fever. Sydenham long ago taught, that almost all diseases may be advantageously treated, in the first place, by bleeding and purging; and our own experience has convinced us, that these remedies, at the beginning of our curative efforts, are seldom injurious in *any* disease, while they very commonly give a beneficial effect to subsequent stimulation which it could not otherwise produce. It is an error to suppose that we must keep on with the method of treatment with which we set out. Stimulants and tonics are seldom proper as first remedies, in any form of disease, nor blood letting, cathartics and abstinence, as last. Depletives prepare the vital properties of the system, for being favourably acted on by excitants. It is loose phraseology to speak of these, as distinct and incompatible plans of cure. They are but the elements of one plan, and in most diseases neither of them can be rejected without rendering the treatment imperfect. The skill of the practitioner will be found in their proper combination, not in the selection of either. As well might a general decide, *a priori*, that he would employ nothing but artillery in repelling one invasion, infantry another, and cavalry a third, when the union, or successive operation, of every variety of troops might become necessary. By an ignorance, or neglect of this therapeutic maxim, we have seen much injury done to the sick. It is a modification of *Brunonianism*. The physician seeks to determine whether the disease is 'inflammatory' or 'nervous'—'sthenic or asthenic' 'sanguineous' or 'dyspeptic'—and acts accordingly. The moment his 'mind is made up' he opens *one* of his lockers, instead of the entire magazine, and proceeds to execute the 'plan of cure which the 'nature of the disease requires.' Is it a phlegmasia ?—then for the lancet, leeches and gum water, for 30 days. Are the bowels and liver torpid ? Give the blue pill by night, and cathartics by day, and keep on till the stools have a 'pleasant smell'—if this should be

slow in happening, do not be 'weary in well doing' but throw in heavier doses, and wonder with the patient how he could hold so much bad matter. Is the disease of an intermitting type? Abjure the whole catalogue of depletions and abstractions, and begin, continue, and end, with the bark and arsenic.—Is the fever typhus or bilious? why, typhus. Then give him stimulants, narcotics, alexipharmics, sudorifics, and tonics; 'the rule requires it:' if you don't keep his strength up, it will 'run down:' If any thing can cure him this plan will: it is the right one, and if you let him die it is your own fault.—But is not the case a bilious fever? Yes, for the patient vomited yellow bile. Well then, of course, give calomel; repeat it, reiterate the repetition, and repeat the reiteration, till his liver is tired out; when, if he should not recover, you will have the satisfaction of knowing that you did your duty.

The last Chapter of Dr. M.'s work, is on the state of the nerves in neuralgia and intermittent. He wishes that this chapter should be considered in the light of an appendix of speculations to the essay, in which he was guided by 'evidence, experience and induction.' He believes, that in the diseases which are the subject of that essay, the nerves are *primarily* affected. What this affection is, he does not pretend to teach or understand. It is a departure from that condition, which enables them to perform their proper office in the animal economy, and it is the first effect of the remote cause. But our means of observation do not enable us to appreciate it anatomically. The congestions and other alterations of structure, which imply disruptions of the circulation, or disordered conditions of the chemistry of life, he regards as consequences of the primary læsion of the nervous function.

In intermittent fever there is, he thinks, an unhealthy state of the whole nervous system; in neuralgia there is a superadded morbid state of a particular nerve, generally induced by the former, or by its remote cause, but some times by other causes acting topically. The inflammations (so called) which, occasionally, show themselves in connexion with neuralgia, he views as distinct from true inflammation, the remedies for which, generally aggravate and can never cure them.

Back-wood's-men, as we are, and but little qualified for criticisms on the style and manner of the great writers of the old world, we must be permitted to say, that we have seldom met with a work more

exceptionable in these respects than that which we have just travelled through. We do verily believe, that all which it contains might have been told in half the number of words. There is a playing round and never coming to the point, which we do not recollect ever to have seen equalled. Every thing seems preliminary with our author—you are not quite sure, that you are, at any time, in the middle of his argument or inquiry. His sentences are generally deficient in simplicity and too often in perspicuity ; many of them are parenthetical, and even whole paragraphs might advantageously be enclosed in ( ). The arrangement of his matter is so imperfect, that he felt it necessary, repeatedly, to assure his readers, that, in the present state of our knowledge of the matters which he treats, no better could be adapted,—an opinion from which we are compelled to dissent. We are, indeed, somewhat astonished, that one who could favour the profession with so great a mass of original observations and reflections, should not have been able to reduce them to a more natural method. He every where abounds in general reflections, most of which are excellent, *per se*, but often foreign to the subject which he is at the moment prosecuting, and calculated to divert the mind of the reader from it. Finally, his want of condensation shows itself in a great deficiency of propositions and corollaries, which distributed through a book of science, serve, in some degree, the purpose of the fixed stars in physical astronomy, by the aid of which the orbits and movements of the planets are calculated.

We are far, however, from wishing to detract from the merit or fame of Dr. M'Cullough, whose book, seems to us to be, in many respects, one of the most curious, original, and interesting, in its inquiries and results, that has lately fallen under our observation, while it every where abounds in evidences of zeal for the dignity of the profession, and breathes throughout a lofty spirit of candour and general benevolence.

D.

MISCELLANEOUS INTELLIGENCE.

ANALECTIC, ANALYTICAL, AND ORIGINAL.

I. ANALECTIC.

Selected Review.

Of some Symptoms in Children erroneously attributed to Congestion of the Brain. By Robert Gooch, M. D.

The above is the title of the sixth chapter of Dr. Gooch's recent publication, and the subject is of very great importance. The chapter opens in a ludicrous manner, considering the gravity of the subject; but the moral inculcated deserves to be remembered.

"I remember when a boy reading a story of two knights-errant who arrived on the opposite sides of a pedestal surmounted by a shield; one declared it was gold, the other that it was silver; growing angry, they proceeded to blows, and after a long fight each was thrown on the opposite side of the shield to that where he began the fight—when both immediately detected their error: the knight who had said it was silver finding that on the opposite side it was gold, and the knight who had said it was gold finding that on the opposite side it was silver. This story, a little modified, is a good illustration of the state of medical opinion in this age, perhaps in all ages; medical men have no occasion to tilt, for they all throng on one and the same side of the shield; they look only at the golden side, and never dream of the possibility that on the opposite side it may be of a different metal." 355.

Dr. G. properly remarks that two sets of symptoms are distinguishable in cases of disease, and require to be discriminated. One set of symptoms forms what may be called the physiognomy of the complaint—the other indicates the morbid state of organization on which the disease depends.

"Two patients complain occasionally of dimness of sight, swimming of the head, singing in the ears, and observe that if they turn the head on one side to look at an object they feel as if they should fall; but the one is plump, florid, and has a full pulse; the other is pale and thin, has cold hands and feet, and a pulse small and feeble. One practitioner bleeds them both; the other bleeds the one, but does all he can to give blood to the other. The latter cures both his patients; the former cures the one but ruins the health of the other; but such is the nature of the human mind that the cases *for* a preconceived opinion are retained easier than those *against* it. He remembers his good deed, forgets the other, or calls the case 'anomalous,' and marches on, without the slightest doubt that bleeding is the universal and sovereign remedy for dimness of sight, swimming of the head, and singing in the ears, save and except only in 'anomalous' cases." 357.

Dr. G. is anxious to call the attention of medical men to a disorder of children which he finds invariably attributed to, and treated as, CONGESTION or INFLAMMATION of the brain; but which he is convinced often depends on, or is connected with, an opposite condition of the circulation. It is chiefly indicated by heaviness of head and drowsiness. The age of the little patients is generally from a few months to two years or three. They have, in our author's experience, been rather small of their age, in delicate health, and exposed to debilitating causes.

"The physician finds the child lying on its nurse's lap, unable or unwilling to raise its head, half asleep, one moment opening its eyes, and the next closing them again with a remarkable expression of languor. The tongue is slightly white, the skin is not hot, at times the nurse remarks that it is colder than natural; in some cases there is at times a slight and transient flush; the bowels I have always seen already disturbed by purgatives, so that I can scarcely say what they are when left to themselves; thus the state which I am describing is marked by heaviness of the head and drowsiness, without any signs of pain, great languor, and a total absence of all active febrile symptoms. The cases which I have seen have been invariably attributed to congestion of the brain, and the remedies employed have been leeches and cold lotions to the head, and purgatives, especially calomel. Under this treatment they have gradually become worse, the languor has increased, the deficiency of heat has become greater and more permanent, the pulse quicker and weaker, and at the end of a few days or a week, or sometimes longer, the little patients have died with symptoms apparently of exhaustion. In two cases, however, I have seen, during the last few hours, symptoms of oppressed brain, as coma, stertorous breathing, and dilated and motionless pupil." 358.

Dr. Gooch relates an instructive case illustrative of the above remarks, where leeches were applied to a child two years old, and the result was fatal. This case and some incidental remarks are so interesting that we shall here insert them.

"A little girl about two years old, small of her age and very delicate, was taken ill with the symptoms which I have above described. She lay dozing, languid with a cool skin, and a pulse rather weak, but not much quicker than natural. She had no disposition to take nourishment. Her sister having died only a week before of an illness which began exactly in the same way, and which was treated by leeches and purgatives; and some doubts having been entertained by the medical attendant of the propriety of the treatment, leeches were withheld, but the child not being better at the end of two days, the parents, naturally anxious about their only surviving child, consulted another practitioner. The case was immediately decided to be one of cerebral congestion, and three leeches were ordered to be applied to the head. As the nurse was going to apply them, and during the absence of the medical attendants, a friend called in who had been educated for physic, but had never practised it, and who had great influence with the family: he saw the child, said that the doctors were not sufficiently active, and advised the number of leeches to be doubled. Six, therefore, were applied; they bled copiously; but when the medical attendants assembled in the evening they found the aspect of the case totally altered, and that for the worse: the child was deadly pale, it had scarcely any pulse, its skin was cold, the pupils were dilated and motionless when light was allowed to fall on them, and when a watch was held to its eyes it seemed not to see; there was no squinting. Did this state of vision depend on the pressure of a fluid effused into the brain since the bleeding, and during this exhausted and feeble state of circulation, or did it depend on the circulation of the brain being too languid to support the sensibility of the retina? It is well known that large losses of blood enfeeble vision. I saw a striking instance of this in a lady who flooded to death. When I entered the chamber she had no pulse, and she was tossing about in that restless state which is so fatal a sign in these terrific cases. She could still speak, asked whether I was come, (she knew I had been sent for,) and said 'am I in any danger?—How dark the room is!—I can't see.' The shutters were open, the blinds up, and the light from the window facing the bed fell strong on her face. I had the curiosity to lift the lid, and observe the state of the eye; the pupil was completely dilated, and perfectly motionless, though the light fell strong on it. Who can doubt that here the insensibility of the retina depended on the deficiency of the circulation? But to return to the little patient. The next day she had vomited her food several times; it was therefore directed that she should take no other nutriment than a desert spoon-ful of ass's milk every hour, and this was strictly obeyed, and continued for several days. The

child wasted, her features grew sharp, every now and then she looked fretful, and uttered a faint squeaking cry ; the eye-balls became sunk in the socket, like those of a corpse that had been dead a month ; the skin continued cool, and often cold, and the pulse weak, tremulous, and sometimes scarcely to be felt. Under this regimen, and in this way, she continued to go on for several days. At times she revived a little, so as to induce those who prescribed this treatment to believe confidently that she would recover, and she clearly regained her sight, for if a watch was held up to her she would follow it with her eyes. She lived longer than I expected ; a full week, and then died with the symptoms of exhaustion, not with those of oppressed brain. The head was opened by a surgeon accustomed to anatomical examinations, and nothing was found but a little more serum than is usual in the ventricles." 361.

Our author concludes that the heaviness of the head and drowsiness, which were attributed to congestion in the brain, really depended on a deficiency of nervous energy—that the bleeding and scanty diet aggravated this state, "and insured the death of the child."

Dr. G. was summoned one day to see a child, to whose head the medical practitioner was about to apply leeches. He found the child lying on its nurse's lap, exactly in the state already described ; with the same unwillingness to hold up its head—the same drowsiness—languor, absence of heat and of all symptoms of fever. Dr. G. took the medical attendant into another room, and told him the history of the preceding case and of several others of a similar kind. Instead of applying the leeches, they agreed to give from a pint and a half to a quart of ass's milk in the 24 hours—and to take ten minims of the aromatic spirit of ammonia every four hours. When they met next day, the nurse was walking about the nursery with the child upright in her arms. It looked happy and was laughing. The same plan was continued another day, and on the succeeding day Dr. Gooch took his leave.

"So inveterate is the disposition to attribute drowsiness in children to congestion of the brain, and to treat it so, that I have seen an infant, four months old, half dead from the diarrhœa produced by artificial food, and capable of being saved only by cordials, aromatics, and a breast of milk ; but because it lay dozing on its nurse's lap two leeches had been put on the temples, and this by a practi-

tioner of more than average sense and knowledge. I took off the leeches, stopped the bleeding of the bites, and attempted nothing but to restrain the diarrhœa and get in plenty of nature's nutriment, and as I succeeded in this, the drowsiness went off, and the child revived. If it could have reasoned and spoken it would have told this practitioner how wrong he was; any one, who from long defect in the organs of nutrition, is reduced so that he has neither flesh on his body, nor blood in his veins, well knows what it is to lay down his head and doze away half the day without any congestion or inflammation of his brain. This error, although I have specified it only in a particular complaint of children, may be observed in our notions and treatment of other diseases, and at other periods of life. If a woman has a profuse hæmorrhage after delivery, she will probably have a distressing head-ache, with throbbing in the head, noises in the ears, a colourless complexion, and a quick, weak, often-thrilling pulse, all which symptoms are greatly increased by any exertion. I have seen this state treated in various ways, by small opiates, gentle aperients, and unstimulating nourishment, with no relief. I have seen blood taken away from the head, and it has afforded relief for a few hours, but then the head-ache, throbbing and noises have returned worse than ever; the truth is, that this is the acute state of what in a minor degree and in a more chronic form occurs in chlorosis, by which I mean pale-faced amenorrhœa, whether at puberty or in after life. It may be called *acute chlorosis*, and like that disease is best cured by steel, given at first in small doses, gradually increased, merely obviating constipation by aloetic aperients." 365.

Dr. Gooch is unwilling to encumber this paper with a multiplicity of cases, but states generally that the above are only specimens of a class, of which he has seen enough to convince him that they deserve the attention of the profession. Dr. Gooch refers to the excellent remarks of Dr. Marshall Hall on this class of affections. Dr. G. candidly acknowledges that he has been anticipated by Dr. Hall on this point, but so far from regretting it, he rejoices to find himself supported by such good authority.

"The children who were the subjects of this affection, and were thus treated, died not with symptoms of oppressed brain, but with those of exhaustion, and on examining the head after death, the blood vessels were unusually empty, and the fluid in the ventricles rather in excess; in two instances death was preceded by symptoms of effusion, &c. blindness, a dilated pupil, coma, and convulsions; and after death the ventricles were found distended with fluid to the amount of several ounces, the sinuses, and veins of the brain being remarkably empty. I believe the prevalent notion of the profession is, that all sudden effusions of water into the brain are the result of

inflammatory action ; but putting aside for a moment this dogma of the schools, consider the circumstances of this case. For several days before death, all that part of the circulating system which was cognizable to the senses, was at the lowest ebb, consistent with life, and after death the blood-vessels of the brain were found remarkably empty of blood, and the ventricles unusually full of water. From such facts I can draw no other inference than this, that this sudden effusion was a passive exudation from the exhalents of the ventricles occasioned by a state of the circulation the very opposite to congestion or inflammation. This is corroborated by the dissection of animals which have been bled to death. Drs. Saunders and Seeds, of Edinburgh, found that in animals bled to death, whether from veins or arteries, there was found more or less of serous effusion within the head and Dr. Kelly thus expresses himself :—'If instead of bleeding usque ad mortem we were to bleed animals more sparingly and repeatedly, I have no doubt that we should succeed in draining the brain of a much larger quantity of its red blood ; but in such experiments we shall, I think, find a larger effusion of serum." * * * 'Though we cannot, by general depletion, entirely or nearly empty the vascular system of the brain as we can the vessels of the other parts of the body, it is yet possible, by profuse hæmorrhages to drain it of a sensible portion of its red blood, that the place of this spoliation seems to be supplied both by extra and intra vascular serum, and that watery effusion within the head is a pretty constant concomitant or consequence of great sanguineous depletion.' But if this is true, it is of great practical importance, for if we take delicate feeble children, and by bleeding and purging for an imaginary congestion of the brain, reduce their circulation to a very low ebb and keep it so, we run the risk of producing that very effusion of serum into the brain which we are endeavouring by our remedies to prevent." 368.

Dr. Gooch does not expect that medical men will take his word as conclusive evidence for the truth of this paper—nor does he wish it. All he asks is that they will allow his observations and reasonings to lead them to look out for similar cases, and judge for themselves.

"With regard to the point that heaviness of head and drowsiness in children often depend not on congestion, but on deficiency of nervous power, and require for their cure not depletion, but support, I am quite satisfied that candid observers will find that I am right. With regard to the other point, that sudden effusion of serum may take place in the brain from a state of the circulation, the opposite to congestion or inflammation, it is more likely, even if true, to be overlooked ; for such is the force of preconceived opinion, and such the prevalent notions on the subject, that the following will be the process in most minds. A child has been suffering some obscure symptoms for many days, when suddenly and unexpectedly it becomes

blind, its pupils are dilated and motionless, it becomes convulsed, comatose, and dies. On opening the head serum is found in the ventricles, and without any further enquiry it is immediately taken for granted, that this effusion was the effect of overlooked inflammation of the brain, and regret is felt that active depletion had not been employed; the inference may be a correct one; all I contend for is that it should not be taken for granted, but that those circumstances should be minutely enquired into which throw light on the state of the circulation in which the effusion occurred." 374.

We strongly recommend Dr. Gooch's observations to the attentive consideration of our professional brethren.

Medico-Chirurgical Review.

On the Inefficacy of Ammonia and the Efficacy of the Cold Affusion in the Treatment of Poisoning with Hydrocyanic Acid.—Some years ago, Mr. Murray, of London, proposed ammonia as an antidote for poisoning with prussic acid, and the trials he made with it on the lower animals were so satisfactory, that he advertised his willingness to take a dose sufficient to cause death in ordinary circumstances, provided a competent person should be at hand to administer his antidote. The investigation, of which we are now to give an account, will probably satisfy him that he might have found reason to repent his rashness, had any one been so curious as to accept his offer.

Dr. Herbst, after repeated experiments, has come to the conclusion, that ammonia, even in a concentrated state, when administered to an animal which has taken a dose of prussic acid large enough to prove fatal, and when not administered till the symptoms have existed for some space of time, will hardly ever save its life. But he admits, that in cases in which the dose has not been adequate to occasion death, yet causes severe symptoms, this remedy is of substantial benefit, by mitigating and shortening its effects. He further objects to its general use as antidote, that in a tolerably concentrated state, it instantly excoriates the parts to which it is applied, and that in a state so dilute as to be free from this inconvenience its efficacy ceases. Having detailed two cases in which large and repeated doses of ammonia gave but temporary relief, and failed to counteract the fatal effects of the poison, he relates several calculated to establish the superior efficacy and certainty of the cold affusion.

"When the dose of the poison was insufficient to prove fatal, two affusions were commonly sufficient to dispel every unpleasant symptom. When the dose was larger, it was requisite to repeat it more frequently, and to persevere for a longer time. The certainty of success depended greatly on the early employment of the remedy. It was most to be trusted when resorted to immediately after the administration of the poison, or at all events during the convulsive stage.

while the muscles were in a state of contraction, the eyes staring, insensible, and immoveable, the head drawn backwards, and the extremities extended. This stage is rapidly succeeded by general relaxation of the body, gradually increasing slowness and feebleness of the respiration, a slow, weak, or almost imperceptible pulse; and death is then close at hand. Even in this paralytic condition, the cold affusion will sometimes recal the expiring spark of life; then the convulsions of the muscles were renewed, the extremities became again hard and immoveable, and, by the gradual abatement of the spasms, the effects of the poison were slowly dispelled."

1. A full grown spaniel of a small breed got six grains of Schroeder's acid. Immediately he uttered a piteous howl, fell down, stretched out his legs, and in a few seconds appeared dead. Cold water was then poured over its head and back, and subsequently over the whole body; when the breathing began to return, the animal in a few minutes shook itself, and then tried to rise. In a quarter of an hour he was able to stagger forward a little. In an hour he had recovered entirely. 2. A strong pointer bitch, five years old, took eight drops of Ittner's prussic acid. In a few minutes she staggered, drew her head backwards, and was on the point of falling, when cold water was dashed over her head. Instantly she recovered, and in a few seconds she was as lively as before the experiment. Several fresh small doses of the acid were subsequently given, and always with the effect of developing its narcotic action; but they were as uniformly removed by a fresh affusion. In fifteen minutes, violent vomiting of tough white mucus supervened, and she slavered much. These symptoms, however, also ceased in an hour and a half, when she took her customary meal. 3. Next morning eight grains were again administered to the same animal. Immediately she tumbled down, and was attacked with opisthotonos of the most violent kind, the breathing became more and more obstructed and feeble, and speedy death was evidently threatened. No time was now lost in applying the cold affusion. In a single minute the breathing became regular, she raised her head, looked bewildered around her, but continued lying. After a second affusion she stood up, walked, but with difficulty, and in an hour was so well that no sign of the action of the poison could be observed. 4. The most decisive trial was the following. Two young poodles were chosen, of the same age and size, and accustomed to the same sort of food. To one was given four drops of Ittner's acid, which had the effect only of causing temporary staggering. Eight drops were then given, and caused loud cries, mucous vomiting, and opisthotonos. From this dose too he was beginning to recover, when four drops more were given; and death then ensued four minutes after the first administration of the acid. The total quantity of acid amounted to seven grains. This quantity was next given to the other dog at one dose. He immediately turned round, staggered, and fell down, incapable of stirring, and insensible. The head was drawn strongly backwards, the legs were extended, and in scarcely half a minute afterwards, the breathing was imperceptible, and the pulse hardly to be

felt. The cold affusion of the head was then resorted to without delay, as the muscles were flaccid, and the animal appeared dead. At first it had no effect. The earliest sign of returning animation was renewal of the opisthotonos, and extension of the flaccid extremities ; at the same time he uttered a feeble cry, which soon afterwards became stronger. The stiffness of the body continued a long time. The affusion was then repeated over the whole body. The crying continued, and touching the body seemed to cause pain. The affusion being repeated every fifteen minutes, the respiration at length became somewhat stronger ; but it always returned to its feeble state in the intervals. At eight in the evening, (the author does not state the interval after the beginning of the experiment,) the animal was completely restored to health, ran about, barked, and took his food as if he had never been ill. 5. Nine drops of Schrœder's acid were injected into the external jugular vein of a little house dog, six months old, in five minutes, twelve drops more, and other five minutes, fifteen drops, without any distinct effect, except quickness, weakness, and irregularity of the action of the heart. Twelve grains (27 drops) were then injected at once, upon which there ensued involuntary discharge of fœces, most violent tetanus, and all the customary symptoms, followed by flaccidity of the body and almost imperceptible breathing. The first cold affusions made the animal spring high up, and when continued, they removed in no long time the paralysis of the hind legs, which was the last symptom that remained. In three quarters of an hour he had recovered completely. 6. Three days afterwards fifty drops were injected into the opposite jugular vein of the same animal. The tetanus was even more violent than before. The cold affusion was not resorted to, until the whole body was in a state of paralytic flaccidity, the muscles of the eyes alone preserving their spasmodic contraction. The effect of the remedy was equally remarkable as in any former experiment or after the first application, the breathing immediately became stronger ; and in four hours the dog was as lively as ever. The same beneficial results were invariably obtained in other experiments, in which the poison was applied to the eye, to the inner membrane of the nose, or to external wounds. When the dose was so large that its effects were beyond the reach of the cold affusion, it was observed to prove fatal instantaneously, that is, almost before there was time to remove the remedy.—*Archiv fur Anatomie and Phosiologie, No. 2,* 1828. *New-York Med. Phys. Journal.*

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3. Christison on Poisons.

Evidence of General Poisoning.—The evidence of the existence or non-existence of poisoning in general (that is, without reference to any particular poison) is derived from five sources—

the symptoms,—the post-mortem appearances,—chemical analysis,—experiments on animals—moral circumstances. It will not be uninteresting or useless to such a little on each of these subjects, especially as they have been but imperfectly investigated by preceding writers.

Evidence from symptoms.—Not many years ago questions of poisoning were decided by symptoms alone. But no such evidence is now trusted to, per se. Still the symptoms are great auxiliaries, and in some cases, as of mineral acids, arsenic, sublimate, and strychnine, they are almost conclusive. The chief characteristics of the symptoms in poisoning are that they commence suddenly, proceed rapidly to a fatal issue—that they increase steadily—are uniform throughout their course—begin after a meal—and appear when the body is in a state of health. The exceptions to each of these characteristics are very numerous, and so very evident that we shall not dwell on them. Thus the first characteristic is exceedingly liable to exceptions, where the dose is small. Arsenic, digitalis, strychnine, &c. may be introduced into the system slowly, and yet so as to produce their specific and fatal effects at last. With respect to the appearance of symptoms of poisoning "*very soon after a meal*," we know that this is the time at which some of the most fatal disorders commence, as apoplexy, cholera, perforation of the stomach from chronic ulceration, &c. At the same time it is to be recollected that the diseases which commence immediately after food, and proceed to a fatal and sudden termination, are few in number, and none of them by any means frequent. The occurrence of such a circumstance may therefore, justly be deemed suspicious. The same may be said respecting the other items above enumerated. The following passage is curious and interesting.

"On the other hand, if the symptoms do not begin soon after food, drink, or medicine has been taken (the circumstances being such as to exclude the possibility of poison being introduced by a wound, by the lungs, or by any other channel but the stomach,) the presumption on the whole is against poisoning, and sometimes the evidence to this effect may be decisive. The principle now propounded may be

often a very important one in the practice of medical jurisprudence ; for when united with a little knowledge of the symptoms antecedent to death, it may be sufficient to decide the nature of the case. Thus it is sufficient, in my opinion, to decide the late celebrated case of the *Crown Prince of Sweden.* The Prince, while in the act of reviewing a body of troops on the 28th May, 1810, was observed suddenly to waver on his horse ; and soon afterwards he fell off while at the gallop, was immediately found insensible by his staff, and expired in half an hour. As he was much beloved by the whole nation, a rumour arose that he had been poisoned ; and the report took such firm root in the minds of all ranks, that a party of military, while escorting the body to Stockholm, were attacked near the city by the populace, and their commander, Marshall Fersen, murdered ; and Dr. Rossi, the Prince's physician, after narrowly escaping the same fate, was in the end obliged to quit his native country. Now, no other poison but one of the most active narcotics could have caused such symptoms, and none of them could have proved so quickly fatal unless given in a large dose. It was proved, however, that on the day of his death the Prince had not taken any thing after he breakfasted ; and an interval of nearly four hours elapsed after that till he fell from his horse. This fact alone, independently of the marks of apoplexy found in the head after death, and the warnings he had several times before it, was quite enough to show that he could not have died of poison, as it was incompatible with the known action of the only poisons which could cause the symptoms." 40.

We all know how often an outcry is raised against individuals or a family, when a member happens to die suddenly, the family itself not being in harmony with each other. In several instances of this kind, our author has been induced to dispense with an analysis, by resting on the criterion alluded to in the foregoing extract.

Evidence from Morbid Appearances. These, like the former, had great weight in evidence, but often with less reason. Except in the instance of a very few poisons, the morbid appearances *alone*, can never distinguish between the effects of them and of natural disease or violent death. Lividity of the body, and early putrefaction are still thought by the vulgar to be signs of poisoning ; though there is no foundation for such an opinion. In poisoning by arsenic, it is well known, that there is the reverse of early putrefaction. The post-mortem appearances are inflammation of the intestinal canal and its products in one class of poisons—congestion of the cerebral vessels in

another class—and in a third a combination of the two. But neither set of appearances are invariably caused by the poisons which usually induce them—congestion of the brain is rarely caused by those which are currently supposed to induce them and, in fine, most of the appearances of both kinds, are exactly similar to those left by many natural diseases. Still the post-mortem appearances are not to be neglected, as they will assist the investigator greatly, in connexion with other species of evidence.

Evidence from Chemical Analysis. This, of course, is the most decisive of all the branches of proof. It is esteemed most valid when the poison is detected in the stomach, intestines, or œsophagus—then in the matter vomited—and next, in articles of food, drink, or medicine of which the sufferer has partaken—and lastly in articles found in the possession of the prisoner. When poison is found in the stomach, a question may arise whether or not it was the cause of death.

We are next to inquire what are the causes which may remove the poison beyond the reach of the inspector—it may have been discharged by vomiting or purging—absorbed or decomposed.

In the trial of George Thom for poisoning the Mitchells, on the Aberdeen Circuit, 1821, it was clearly proved that the deceased had died from arsenic, although none could be detected in the stomach, for the man lived seven days, labouring under incessant vomiting. In a case where the patient lived only five hours, Dr. C. could not detect more than a fifteenth part of a grain of arsenic in the contents and coats of the stomach. A case is related in an American Journal, where a man had swallowed an ounce of arsenic, and died in eight hours—yet no poison could be detected by chemical analysis. And yet it is singular how ineffectual vomiting often proves in the expulsion of some poisons from the stomach. Arsenic and others which are not easy of solution may remain adhering to the villous coats, notwithstanding repeated and violent efforts to dislodge them by vomiting.

In respect to absorption, it has several times happened that laudanum, and even solid opium has soon disappeared in bodies poisoned with these substances. Dr. C. and Mr. Newbigging could not detect laudanum in the body of one who undoubtedly swallowed it, and who died in about eight hours. Pyl has related a similar instance. Great errors have been committed by medical witnesses in consequence of overlooking the fact of absorption. Dr. C. alludes to a recent instance which happened at a Coroner's Inquest in London.

"A young man one evening called his fellow-lodger to his bedside; assured him he had taken laudanum, and should be dead by the morrow; and desired him to carry his last farewell to his mother and his mistress. His companion thought he was shamming; but next morning the unfortunate youth was found in the agonies of death. The moral evidence was not very satisfactory; but that is of little consequence to my present object. The point in the case I would particularly refer to is the declaration of the medical inspector, that laudanum could not have been taken, because he did not find any by the smell or by chemical analysis in the contents of the stomach."* 52.

Lastly, the excess of a poison may be decomposed. Vegetable and animal substances may be altogether destroyed by the process of digestion. The case of a French soldier is related, who died in six hours and a half after swallowing two drachms of solid opium, none of which could be found after death, nor the smell of opium detected. Some mineral poisons, as sublimate, lunar caustic, hydrochlorate of tin, are also decomposed in the stomach, but they are not removed beyond the reach of chemical analysis. The decomposition is a chemical, not a vital process, and the base of the poison may be found in the solid contents of the stomach under some other compound form. The decomposition of the body also may render it impossible to detect poison that has been actually swallowed. Oxalic acid may be dissolved and then exude—vegetable narcotics may putrefy, and Prussic acid may be volatilized. Arsenic, however, has been detected in the body fourteen months after interment.

* "Morning Chronicle, Jan. 8, 1823."

Experiments on Animals. This is more equivocal than was once imagined ; but our author thinks that some medical jurists have overstepped the proper limits in rejecting this species of proof in toto. Still it is not likely to be resorted to directly in cases of poisoning ; but the practitioner should be acquainted with the opinions which have been given by others —too rashly no doubt—and which may be canvassed in a court of law. An important objection, indeed to this species of evidence, is the fact that what is poison to man is not always poison to animals, and vice versa. It is curious that the cat and the dog are affected by almost all poisons exactly in the same way as man—the dog more particularly.

"In general poisons act less violently on these animals ; thus two drachms of opium are required to kill a middle-sized dog,* while thirty-six grains have killed a man, and probably a much less quantity would be sufficient for the purpose. It appears that one poison, alcohol, acts more powerfully on them than on man. There are also some poisons, such as opium, which, although deleterious to them as well as to man, nevertheless produce in general different symptoms. Yet the differences alluded to are not greater perhaps than exist between man and man in regard to the same substances ; and therefore I think it may be assumed, that, on the whole, the effects of poisons on man differ little from those produced on the dog and cat." 55.

Moral Evidence. There is no doubt that the medical man, in the course of his professional investigation of the case, has excellent opportunities of acquiring information of the moral and circumstantial kind, which may often be of great advantage both to himself and the court. The heads of moral evidence, to which the medical practitioner ought to direct attention, while proceeding in his more immediately professional course, are the following.

"1. To suspicious conduct on the part of the prisoner before the event, such as dabbling with poisons when he has nothing to do with them in the way of his profession, conversing about them, or otherwise showing a knowledge of their properties not usual in his sphere of life :—2. To the purchase or possession of poison recently before the date of the alledged crime, and the procuring it under false pre-

* "*Charret*, in Revue Medicale, 1827, i. 514."

tences, such as for poisoning rats when there are none on his premises to poison, or for purposes to which it never is applied :—3. To the administration of poison, either in food, drink or medicine, or otherwise :—4. To the intent of the prisoner, such as the impossibility of his having administered the poison ignorantly, or by accident, or for beneficial purposes, alledged or not alledged :—5. To the fact that other members of the family, besides the deceased, have been similarly and simultaneously affected :—6. To suspicious conduct on the part of the prisoner during the illness of the person poisoned, —such as directly or indirectly preventing medical advice being procured, or the relations of the dying man being sent for, or showing an over-anxiety not to leave him alone with any other person, or attempting to remove or destroy articles of food or drink, or vomited matter which may have contained the poison, or expressing a foreknowledge of the probability of speedy death :—7. To suspicious conduct after the person's death, such as hastening the funeral, preventing or impending the inspection of the body, giving a false account of the previous illness, showing an acquaintance with the real or supposed effects of poison on the dead body :—8. To the personal circumstances and state of mind of the deceased, his death-bed declaration, and other particulars, especially such as tend to prove the impossibility or improbability of suicide :—9. To the existence of a motive or inducement on the part of the prisoner, such as his having a personal quarrel with the deceased, or hatred of him,—his succeeding to property by his death, or being relieved of a burden by it,—his knowing that the deceased was with child by him." 62.

Imaginary, Pretended, and Imputed poisoning. The leading points to be attended to in this kind of investigation are laid down by our author, and an actual example of each variety is given by way of illustration.

Imaginary poisoning can hardly occasion deception or embarrassment. The same hallucination which induces the belief of poison, will betray itself when the investigation bears upon the symptoms, the administration, &c. of the poison.

Feigned or pretended poisoning is much more apt to escape suspicion—and, when suspected, is difficult to develope satisfactorily, because the actor has it in his power to lay his plans with care, and even to make himself acquainted with the properties of the poison whose effects he intends to feign. Still he can rarely enact his part so well as to deceive a skilful physician.

"In a case of feigned poisoning an excellent mode of investigation is, after hearing out the individual's own story to put a number of questions involving an alternative answer, one alternative being compatible and the other incompatible with the alledged nature of his illness. No unprofessional person could stand such a system of interrogation, if skilfully pursued. Not only will his answers be often wrong; but likewise his manifest perplexity how to answer will of itself supply evidence of his falsehood." 77.

Great attention must also be paid to the chemical analysis. The following case will illustrate many of the rules to be observed on such occasions.

A remarkable trial for imputed poisoning occurred not many years ago, at the York assizes, where a man named Whalley was indicted for administering arsenic to Martha King, who was pregnant by him.

"The woman King swore, that the prisoner, after twice trying, but in vain, to prevail on her to take drugs for the purpose of procuring abortion, sent her a present of tarts, of which she ate one and a half,—that in half an hour she was seized with symptoms of poisoning with some irritant poison,—and that she continued ill for a long time after. Mr. Thackrah found arsenic in the tarts that remained untouched, and likewise in some matter that was vomited in his presence after the administration of an emetic, as well as in other matters of vomiting which were preserved for him between his first and second visits. Her appearance, however, did not correspond with the complaint she made of her sufferings, her pulse and tongue were natural, and on careful investigation the following inconsistencies were farther detected. 1. She said she felt a coppery taste in the act of eating the tarts, a taste which arsenic certainly never possesses. 2. From the quantity of arsenic in the tarts which remained she could not have taken above ten grains while even after repeated attacks of vomiting, the alledged matter subsequently preserved contained nearly fifteen grains. 3. The first matters of vomiting contained only one grain, while the matter alledged to have been vomited subsequently contained fifteen grains. 4. The time at which these fifteen grains were alledged to have been vomited was not till between two and three hours after the symptoms began; in which case the symptoms would before that time have been violent. The prisoner was acquitted, and the prosecutor and another woman who corroborated her deposition afterwards admitted that they had entered into a conspiracy to impute the crime to him, because he had deserted her on finding that she was too intimate with other men." 80.

Medico-Chirurgical Review.

4. Dr. Monro on the Diagnosis of Hernia.

Inguinal Hernia We are all aware that males are peculiarly prone to this, and the other sex to the femoral hernia. The following tables, however, shew on a large and convincing scale the general laws respecting the individuals affected by the disease, the side of the body on which it is most frequent, and its more ordinary complications.

From July 6, 1805, *to July* 6, 1811. 1637 *Cases.*

			Males.	Females.
332 double	In both groins,		319	2
	thighs,		0	11
1257 single	Inguinal,	Right side,	671	26
		Left side,	354	13
	Femoral,	Right side,	5	54
		Left side,	2	37
	In the naval,		13	76
	Ventral herniæ,		3	3

Several patients having umbilical hernia, had also one or two inguinal or femoral herniæ, one person had a ventral, and two inguinal hernia.

The following document, extracted from the 25th volume of the Philosophical Magazine, corroborates the former. 3013 patients were examined.

		Males.	Females.
741 Double Ruptures	In both thighs (femoral)	3	44
	In both groins (Inguinal)	609	85
2272 Single Ruptures	In one thigh (femoral)	57	136
	In one groin (inguinal)	1520	399
	In the navel (umbilical)	36	97
	Total,	2225	788–3013

Of the single ruptures, more than one third happened on the left side, and nearly two-thirds on the right side. A very small proportion of triple ruptures, and other extraordinary cases, likewise occurred in the above number; but they were extremely rare, and mostly existed among the female sex.

These statements amply corroborate the general opinions regarding the sex most affected with inguinal or femoral hernia. They likewise prove the much greater prevalence of rupture on the right side than on the left, and the greater disposition in females to suffer from umbilical herniæ. Passing over the common varieties of the disease we stop at—

Inguinal Herniæ, which in situation resemble Crural Herniæ, owing to Malconformation of the Inguinal Canal.

The fourth modification of inguinal hernia is very rare, and occasioned by the malconformation of the inguinal canal, which is owing

to the smaller tendinous fibres, which connect the larger columns of the external oblique muscle, being wanting.

In these circumstances the inguinal canal is imperfect; hence the bowels, when protruded, do not follow the course of the inguinal canal, but push immediately downwards and outwards, forming a tumour in the situation of a crural hernia.

This modification of hernia has been described by the late Professor HAMILTON of Glasgow, and also by PETIT. It remained for the late Mr. ALLAN BURNS of Glasgow to detect the cause of such a deviation, which he has described to me in the following letter, dated March 7, 1806:

The tumour was found in the bend of the left thigh. The inguinal canal was fully as large as it is usually met with in the male, and besides, so very short, that it presented, when fully unfolded, almost the appearance of a mere aperture. The round ligament of the womb was enveloped in a distinct tunica vaginalis, and bearing the same relation to the intestine that the spermatic cord does in the other sex. On the right side, the herniary sac was about two inches in length, and in shape resembling a Florence flask; the bulbous extremity extending from the lower orifice of the canal, was contained in the upper part of the thigh, *lying more in the course of a crural than of an inguinal hernia.*

This deviation from the usual direction of the tumour was produced by a premature separation from each of the external pillars of the inguinal canal. Where the inguinal canal is imperfectly formed, it is generally owing to the incomplete extension of the posterior or internal side of the ring.

Where this happens, the internal orifice of the canal is brought nearer to the pubes than it ought to be, but when the imperfection is produced by a premature separation at the external pillars, then, by dissection, we find the internal orifice in its proper place, but the external outlet is removed from the pubes.

In the first instance, when the herniary tumour protrudes, it lies just over the tubercles of the pubes, and follows the course of the spermatic cord into the scrotum, while in the latter it lies nearer to the spine of the ilium, and is seated just over the crural foramen, and by extension, descends along the thigh, *counterfeiting the appearance of femoral hernia.*

By attention, however, it is readily distinguished from the latter, by being felt lying over the crural arch, and on the outer side of the tubercle of the pubes.

When the bowels follow the course of the inguinal canal, the epigastric artery is situated nearer to the symphysis pubis than the hernia; whereas, when the bowels do not follow such a course, but pass only through the under abdominal aperture, then the epigastric artery is situated nearer to the anterior spinous process of the ilium than the hernia."

5. Excision of the Nerves in Cases of Neuralgia. By J. C. Warren, M. D.

As this operation has of late become rather unfashionable, we select three cases reported from the Mass. General Hospital in the Boston Med. and Surg. Journal.

Case 1.—*Excision of the Submaxillary Nerve.* Mr. S. aged 70, applied to me, stating that he had a dreadfully painful complaint in the face, and that he wished an operation for its relief. It appeared that he had been first affected without any obvious cause about fourteen years before. His pains were of two kinds ; first, a constant aching pain, which he compared to the worst toothache ; second, a spasmodic affection which occurred many times during the day. When he had the latter kind of attack, the muscles of the face quivered, the face became red and swelled, the eyes were filled with tears, and his intellect was for the moment suspended. For the last four years he had not been free from pain while awake, and his sleep was short and interrupted.

Respectable practitioners in the part of the country where he lived, had performed three operations, two on the sub-orbitar nerve and its branches, the third on the nerve of the lower jaw, where it comes out on the chin. These operations gave him a degree of relief, but the pain continued with a severity intolerable, and life had become a burden to him.

The pain he described as beginning near the ear, and thence darting into the lower and upper jaw, the lips, eye, forehead and scalp. The patient had made himself acquainted with the situation of the nerves of the face, and believed his pain to reside in the facial nerve, which he wished to have divided.

He was informed that an operation such as he wished might be executed ; but that in his case the affection appeared so general that there was no prospect of a cure ; and that, in fact, there were not any cases on record, of a successful division of the facial nerve at its root for this disorder. As soon as the patient understood that the operation was practicable he desired to have it performed, and agreed to enter the Hospital, on account of the superior advantages it afforded over any private situation.

The operation was thus conducted. An incision two inches long was carried from the back of the ear downwards in front of the mastoid process. The edge of the parotid gland was then exposed on one side, and on the other, the anterior edge of the mastoid muscle. The dissection being continued between the parotid gland and the mastoid process, the facial nerve was exposed where it crosses this space and passes on the gland, it was divided and a portion cut out. When the nerve was cut, the muscles of the face quivered and were paralyzed ; but the patient said he merely perceived the division ;

that it was not attended with an acute pain, and that the principal cause of his sufferings was not reached.

After this operation, it appeared that the pain in the upper part of the face was diminished ; perhaps removed. But the patient now became sensible that the most acute pain, and that which probably had existed first, was seated deeply in the lower jaw, beginning at the zygomatic arch and shooting into the bone. It was entirely independent of the wound made in the operation. From this wound he experienced no inconvenience, was unwilling to speak of it, and scarcely wished it dressed, so greatly was he disappointed at not being relieved from his sufferings. He begged his case might be again taken into consideration, and something more if possible devised for his relief. A meeting of the consulting physicians and surgeons being called, I proposed the operation which is described hereafter, and it being agreed to, was performed nine days after the first.

An incision was made over the side of the jaw, from the semilunar notch to the inferior edge of the bone. The parotid gland being exposed, was divided as far back as possible, and turned forwards. Then the masseter muscle was divided in the course of its fibres to the bone, and afterwards the edge of the knife being turned forwards, some of the fibres were transversely cut, in order to make room over the bone. A trephine, three quarters of an inch in diameter, was then applied half an inch below the semilunar notch, midway between the anterior and posterior edges of the jaw ; and the circular piece sawed through and removed in two parts, the external table by a lever, the internal by forceps. Between these pieces lay the nerve, with its accompanying artery and vein, at the point where they penetrate the bone. At the superior edge of the hole in the bone was seen the large internal maxillary vein, pulsating from the movements of the artery. The sub-maxillary nerve being now raised on a probe, the patient directly exclaimed that this was the seat of his sufferings. Half an inch of this nerve was cut out, and on examination, it was found to comprehend the branch given to the internal face of the lower jaw. The artery was tied without difficulty. The transverse artery of the face had been previously tied on each side of the wound. A suture was employed to bring together the two parts of the parotid gland, and the wound closed by adhesive plaster.

The patient said that the pain of this operation could not be compared with that from his disorder. The pain on the wounding and dividing the maxillary nerve was most acute.

On the evening of the operation he was relieved from pain, the first time for four years ; and had no return of it afterward. On passing a probe into the wound three or four days after, a branch of nerve in the masseter was touched, and a violent pain produced. The pain did not, however, return, nor had he any threatening of his former attacks. On the nineteenth day from the second operation, his wounds being nearly healed, he left the Hospital perfectly cured of his disease, with the strongest conviction that it would not recur, and not a little gratified by his own perseverance.

Case 2.—*Excision of the Infra-Orbitar Nerve.* Encouraged by the result of the last case, I operated in the same manner in the following cases.

Mary Tucker, aged fifty-one, admitted into the Mass. Gen. Hospital 24th April, 1824.

Has a pain in the left side of the face, situated in the infra-orbitary foramen, but often extending to the jaws and occasioning a sense of tightness and burning in these parts. She describes the pain as acute and lancinating, and as always aggravated by exposure to cold and by fatigue. During the paroxysms her vision is much impaired, and when they are severe, the face swells very much. There are moments when she is free from complaint, but talking or exertion is apt to bring it on again. The disease is most troublesome at night, and prevents sleep. Says she has not slept all night for a number of years.

She has had this disease for eighteen years. For six months past has had almost constant pain. She says she has had the cow-pock, was very ill, and in her recovery had pain and stiffness in the left side of her face, with an inclination of the face to the left side. This lasted three months ; during the warm weather she was free from this affection, but, in cold weather, it recurred, and has gradually assumed its present form. She had rather a feeble constitution originally, but enjoyed tolerable health previous to the present disease. Has occasionally used anodynes with advantage at night. Has always been rather costive.

R. Solut. Sulph. Magnes. ziij.

29th.—*Operation.* The head was inclined to the right shoulder, resting upon the breast of an assistant. An incision was then made directly over the nerve, from the orbit, downwards about an inch. The seat of the nerve was made certain by passing a probe into the wound. Then the nerve being fully exposed, was divided near the infra-orbitar foramen ; a piece half an inch long was dissected out and removed with its incipent ramifications. After the operation, a few small vessels bled considerably, which were restrained by sponges and cold water. The patient was then returned to her bed.

30th. At two o'clock, yesterday, the sponge was removed, and the vessels bled as copiously as before. A layer of lint was placed in the wound. The patient complained of some soreness and pain last evening, and was directed to take thirty drops of laudanum. This morning is tolerably comfortable ; says she passed a quiet night. Now the situation of the pain has altered ; since the operation, it is more confined to the parts about the lower jaw. Bowels well. Face a little swollen. From this time the pain gradually diminished, and in June she left the Hospital, entirely cured.

Case 3.—*Margaret Andrews, widow, aged* 57. *Entered the Mass. Gen Hospital March* 16, 1827.

Six years ago had a carious tooth in upper jaw, on left side : at

the same time began to have darting or jumping pain on left side, commencing at this tooth and passing up the cheek. Had the tooth extracted with some relief. Paroxysms of pain have gradually increased in violence and duration—are worst, as she thinks, in August and September. They now commence as at first. The pain passes to the cheek-bone where it is most severe : it then starts in two courses, one passing the external, the other the internal angle of the left eye, and is again felt at a spot on the forehead. The pains sometimes extend to the back of the head. When the pain is most severe, she cannot bear the slightest touch upon the cheek. Severe paroxysms produce nausea ; they are brought on by taking hot or cold substances, or by exposure to cold air. Her appetite is tolerably good ; tongue clean,—is unable to extend it equally on both sides. Bowels prone to costiveness. Ceased menstruating at forty-eight or forty-nine ; does not know which. Has used pills of extract of stramonium and ipecac, with some relief.

The extract of stramonium, the carbonate of iron in large doses, the extract of belladonna with blisters having been successively tried for more than a month without benefit, the operation was determined upon, and performed in the following manner.

An incision one inch and a half long was made from a point half an inch below the middle of the orbit towards the middle of the left half of the upper lip ; the periosteum was exposed to view with the sub-orbitar nerve lying thereon and beginning to divide. The nerve, as it arises from the sub-orbitar foramen, was cut across, then the inferior part being raised and dissected up, for half an inch, was cut off. The patient expressed some pain on the touching and division of the nerve, and at the same time a satisfaction at feeling that the source of her suffering was reached.

After the operation the tics never appeared ; but she had some pain, which rapidly diminished till the 14th of the following month, when she was discharged : and I had the satisfaction to hear from her some months after, that she had no pain subsequently to her quitting the hospital.

6. *Cæsarian Operation on a Patient dead from Hæmoptysis.* In the Hospital St. Louis.

Eliza Doviller, æt. 28, entered the Hospital St. Louis on the 2d of June, 1829, with the usual symptoms of phthisis pulmonalis ; cough, blood-streaked expectoration, sharp pains in the chest, hectic fever, emaciation.

We need not particularize the treatment pursued in the hospital, suffice it to say that on the 14th, the weather being hot and oppressive at the time, she suffered much from suffocation and spat more blood than usual. A small bleeding was had recourse to and procured some relief, but at 7 P. M. of the 17th she was suddenly seized with a frightful hæmoptysis, and expired in the space of four minutes, with the blood gushing from the mouth and nostrils.

When the interne, M. Huguier, arrived, life was quite extinct, and he instantly determined to lay open the uterus and save the life of

the child if possible. The corpse being placed with the head and chest raised by pillows and the thighs flexed upon the pelvis, an assistant retained the uterus in the middle of the abdomen. The integuments then being put upon the stretch by the left hand applied below the umbilicus, a vertical incision was made with a convex bistoury along the median line, commencing at an inch below the umbilicus and terminating at an inch and a half or two inches from the pubes. The skin, cellular tissue, linea alba, and peritoneum were all cut through, with a vast deal of superfluous caution considering that the patient was a dead one, and at length the anterior and superior portion of the uterus was incised "layer by layer," till the membranes were exposed, punctured, and the liquor amnii evacuated. The fore and middle fingers of the left hand were introduced into the opening and the latter enlarged by tearing the membranes, when the whole hand was got into the cavity of the womb, and the sides of the incision separated, by the fingers being held wide apart at its superior angle.

The feet of the child were now sought for with the right hand and quickly found, when both hands were withdrawn and employed to extract the infant which scarcely gave any signs of life. It was pale, exsanguined, motionless, and the pulsations of the heart were scarcely perceptible. The cord was tied before it was cut, frictions with warm cloths on the præcordia were had recourse to, artificial respiration set up, and the child placed in the warm bath. Under the employment of these measures the heart began to beat more vigorously, the nisus of respiration was induced, and the infant uttered that feeble cry which heralds our entrance into a stormy existence. The animal heat could only be retained by keeping the little creature in warm cloths, but at the age of thirty days, when the report closes, it enjoyed good health.

No dissection of the unfortunate mother was permitted by the friends, but that does not matter very much, as the rescue of the offspring by the Cæsarian section is the important portion of the case. Whether an existence so procured will be one of happiness or misery to the infant, whether it bears in its organization the germs of its future destruction by scrofula or phthisis, or whether it does not, it must at least be allowed that no case can possibly arise, in which the Cæsarian operation can inflict a less amount of suffering, in proportion to its good, than it has done in the present instance. The knife of the surgeon or the anatomist "wrings not the tethers" of the dead!

7. *Diagnosis of Gastric and Intestinal Inflammation by inspection of the features of the face.* The Hospital for Children, (Paris), is appropriated to the reception of children of both sexes under the age of 16 years, whatever may be the nature of their complaints. Messrs. Jadelot and Guersent are the medical officers, and, in their lectures, make known to their students, the results of their extensive experience.

M. Jadelot was among the first to acquire an accurate knowledge of gastric and intestinal inflammations; he created for himself, so

to speak, new methods of recognising them, and arrived, by the inspection of the features of the face alone, at an accuracy of diagnosis truly remarkable. This *semeiology*, peculiar to early life, though we can sometimes derive advantages from it in more advanced years, M. Jadelot has named physiognomonic : in a very few words, a succinct idea of it may be afforded to the reader. Independently of the alterations of colour which the face presents, and which furnish to the physician signs more or less positive, the expression of the physiognomy, and the prominence, more or less considerable, of particular traits, are also means of clearing still farther the diagnosis.

In the infant, whose facial muscles are not endowed with great mobility, three principal traits present themselves to the observer. They are nearly parallel, and direct themselves from the centre towards the sides of the face ; the first, (*oculo-zygomatic*,) proceeding from the great angle of the eye, loses itself a little below the projection formed by the cheek-bone ; the second, (*nasal*,) commences at the superior part of the wing of the nose, and prolongs itself, in a semicircle, towards the commissure of the lips ; it is sometimes crossed by a small trait (*genal*) which directs itself towards the middle of the cheek ; the last, (*labial*,) arises at the commissure of the lips, and loses itself towards the chin.

Each of these traits is in relation to one of the visceral cavaties. The first is connected with the diseases of the cerebro-nervous system ; the second, and its accessory, (the *genal*,) with abdominal lesions ; the third, lastly, indicates the affections of the organs of circulation and respiration.

This mode of investigation, valuable in regard to patients incapable of furnishing any clear information to the physician, requires much experience ; but the results obtained from it indemnify the physician for the trouble to which he submits, in order to gain his object.

8. *Lupus treated by the Iodide of Mercury.* One very interesting case of this disease was in the Hospital (Glasgow Royal Infirmary) for some months. I mention it here, because it has been greatly benefitted by a medicine which is not yet much employed in this quarter ; I mean the iodine of mercury.

A. A. a healthy country girl, aged 21, had suffered under lupus for thirteen months at the time she was admitted. The tip and alæ of the nose were the parts affected, and there was a small portion of the cheek also involved, and the disease had in some degree spread to the inside of the nostrils. It presented in several places the distinct tuberculated appearance of lupus, and in other places had proceeded to ulceration, although this was not very deep. She had undergone a course of mercury, and used a great many local applications ; among which were the nitrate of silver and a solution of arsenic, but with little permanent benefit. After her admission lunar caustic was repeatedly applied to the affected parts, and she used an

ointment composed of mercury, camphor, and turpentine, and also a strong arsenical ointment, but not with much effect. The iodide of mercury, in the proportion of six grains and afterwards nine grains, to an ounce of simple ointment, was then used daily, and under this application many parts skinned over, and the disease was in a great measure subdued. She used it for several weeks in the Hospital, and since she was dismissed some of the small tubercles have re-appeared, but were speedily destroyed by the slight ulceration produced by the ointment. In this case, the disease, although not yet completely eradicated, has been kept under, and more completely relieved by this, than by any other application.

I have also used the same preparation, but stronger, in a case of curious anomalous tumours of the face, somewhat resembling the melanosis, but evidently not malignant, although it could not prevent the re-appearance of the affection. I think this preparation of iodine and mercury will be found to answer in many cases of ulcerations where other escharotics, murias hydrarg. nitras argenti, arsenic, &c. have failed."

Here we must stop for the present, but some interesting cases remain to be noticed at a future opportunity.—*Med. Chi. Review.*

9. *Case of Cystocele which was not recognized for a great number of years;* recorded by M. Ribell of Perpignan in the Archives Generales. The patient fifty-eight years of age, had suffered since birth from a large inguinal hernia in the left side, and since the age of fifteen from a smaller one on the right. A truss was not used until the age of 25, when one was applied which made ineffectual compression. The difficulty of making water began about the age of 28. Five years after he applied to several surgeons at Perpignan, who informed him that he had strictures, and treated him accordingly.

On the 22d of August, 1828, having been troubled for five days with more than ordinary dysuria, M. P*** was suddenly seized in the evening with complete retention of urine. After much straining he voided a little pure blood, and subsequently some blood mixed with a little urine and much mucus. Our author was summoned from Perpignan, but owing to the distance was unable to arrive until after the lapse of 24 hours. He had then just made water, though with difficulty, and was free from any fever or excitement. On a subsequent visit our author determined to satisfy himself of the state of the bladder and urethra, but on introducing an instrument, he was not a little surprised to find that it could be passed without difficulty or obstruction of any description, and half a wine-glass full of limpid urine evacuated. It was quite clear from this fact that there was not, and never had been a stricture of the urethra. But what was there then to account for the dysuria of thirty years duration? By dint of close inquiry and accurate examination the following particulars were ascertained.

1mo. The difficulty of making water was always greatest when the inguinal hernia on the left side was most voluminous.

2ndo If the nisus of micturition occurred at the moment when the hernia was small, the urine escaped in a free stream, but if during its evacuation the hernia escaped or enlarged, the flow of the urine was abruptly checked

3tio. Experience had taught the patient, and without his knowing how or why, that in order to make water easily, he should raise the hernia and make the neck the most dependent part.

4to. After making the patient retain his water as long as possible (scarcely four hours and keeping him on his legs in order that the hernia might protrude to the utmost, the catheter was introduced and about four spoonfuls of water only abstracted ; this too could not be effected till the hernia had been reduced.

5to. A forcible injection of two wine-glass-fuls of water into the bladder produced the following results :—It excited a very strong desire to make water, the patient not being accustomed to retain so much liquid in the bladder at a time : it produced a very sensible enlargement of the inguinal hernia though the patient continued recumbent, and it occasioned a distinct sense of fluctuation in the hernial tumour towards its neck.

6to. The hernia on the right side (an intestino-omental one) was readily and completely reducible.

7mo. The left, on the contrary, was irreducible. It appeared to contain intestine towards its lower part, and the testicle seemed to be united to the gut. The neck of the tumour, when grasped between the finger and thumb, gave the sensation of comprising within it two lubricated membranes slipping on each other.

From the foregoing premises, M. Ribell concludes that his patient is affected with a congenital hernia on the left side, originally intestinal ; that this hernia not being restrained by any pressure has insensibly enlarged, and involved the bladder ; and finally that the latter viscus has contracted adhesions in its new situation, and is consequently irreducible.—*Ibid.*

10. *The lower orifice of the nasal canal.* Below the anterior part of the os spongiosum inferius, and under the meatus inferior, we find this opening is generally elliptical, oblique in its direction, and about six lines distant from the beginning of the nares : it is concealed under the os spongiosum inferius, and turned a little backwards : its breadth varies considerably. The nasal canal proceeds obliquely upwards, forwards, and a little outward, towards the great angle of the eye. It is sometimes situated entirely in an excavation of the superior maxillary ; but, generally, the os spongiosum inferius and os unguis equally contribute to its formation. The membrane which lines it is a continuation of the pituitary ; and it sometimes forms a soft and pendent fold of a greater or less length, which is situated against the external wall of the canal. It is by this opening that, according to Laforest, sounds are introduced into the nasal canal, to re-establish the flow of tears in the case of fistula lacrymalis. In order to reach this place, the sound must glide on the floor of the

nasal fossa, under the inferior spongy bone, by turning the convex side of the instrument towards the septum, to the place where we feel that its point has passed beyond the ascending branch of the superior maxillary. Then the sound is turned between the fingers, in order to direct the point above and within the side of the eye, taking care to make it glide, during this movement, on the wall of the lower meatus. The handle of the instrument is thus depressed by this rotatory motion, its point being placed in the nasal canal, and then made gently to advance towards the lacrymal sac. This operation, generally easy to perform on the dead, is very difficult on the living subject, not only on account of insupportable tickling which it occasions, but also numerous variations which are met with in the anatomical disposition of these parts. Indeed, this opening is sometimes so narrow, that it admits with difficulty a very small probe; or the pituitary membrane which lines the nasal canal extends beyond it, and forms a kind of curtain round this opening. In some cases, the partition of the nasal fossæ is inclined so as to press against the lower spongy bone; in others, this eminence is placed so low, that the probe passes on its superior surface, whatever may be the effort made to cause it to glide beneath; or rather its free edge is prolonged, so as to transform the lower meatus into a kind of canal. For these reasons the operation has been abandoned: moreover, inflammation of the pituitary membrane, and fracture of the lower spongy bone have sometimes occurred from the attempts to perform the operation.

Edwards Manual of Surg. Anatomy.

11. *Spontaneous Combustion.* Professor DUPUYTREN says, that many authors have attributed the accident of spontaneous combustion to a combination of alcohol with the living solids; and this opinion they maintain without regard to the origin of the combustion, whether commencing primarily in the individual, or communicated to him from without.

M. DUPUYTREN, without denying that most of the poor subjects of this terrible phenomenon are given to hard drinking, formally denies that the combination of alcohol with the tissues is the cause of the burning.

M. DUPUYTREN seems to be addressing his class. "It has been denied," says he, "that any other than a spontaneous combustion could consume a whole body in a single night. I, like you, passed my youth in dissecting rooms, and perhaps more than any of you, I consumed my time in dissections; but that was thirty years ago, and subjects did not then abound as they now do; they were very difficult to get, we were obliged to rob the cemeteries, and it was still more difficult to get back the debris. It was thought better to get rid of them in another way, and we burnt them. For this purpose faggots were piled up in the chimney, and the remains of two, three or four bodies placed upon them; a fire was made in the evening, and next day the whole was found to be consumed. We also took care to place the fattest pieces lowest, and the combustion was more rapid,

more complete in proportion as there was a greater quantity of fat. But one night was always long enough for the entire combustion."

M. DUPUYTREN applies this practical observation to the consideration of spontaneous combustions. He knows of no instance of it in a lean dry individual: every one of the cases, without exception, occurred in extremely fat people.

If it be observed that the chamber in which a spontaneous combustion has taken place is found full of thick vapour, the walls covered with black carbonised matters; that there are commonly observed streams of grease on the floor, with some ashes, and occasionally fragments of bones, the sole remnants of a body shortly before organised, our remark will obtain additional credence. The above is an account of what is observed: here follows an explanation; and this is the way in which the facts most commonly take place.

A woman (it happens mostly to women) returns to her house after having taken a pretty strong dose of spirituous liquor. It is cold, and a fire is kindled; she seats herself on a chair, with a foot stove under her feet. To the coma produced by the spirituous liquors is added the asphyxia occasioned by the charcoal; the fire is communicated to the clothing; her insensibility is too great to permit her to feel pain; the clothes are consumed; the skin burns; the epidermis cracks open, and the fat melts and flows out; a part runs on the floor, and the rest serves to support the combustion; day comes at last and the whole is consumed.

This is the way that alcohol has been the occasional cause of combustion; it is by producing coma, and not by a pretended amalgamation with our tissues, that it acts upon the human body in this striking manner.

Dr. D. cites the following reasons to show that combustion is never purely spontaneous:

In dissecting rooms it is common in warm weather to find the bodies of half putrid subjects surrounded with a phosphorescent light; but such subjects are never consumed.

A wretched woman, who was excessively fat, returned late one evening to her house, after having drank freely of ardent spirits. It was cold weather, and she seated herself on a chair in the middle of the room. In the morning a thick smoke was observed to fill the whole chamber; streams of grease were observed on the floor, the chafing dish, some remnants of the chair, and a small quantity of ashes, were all that were found.—*N. Amer. Med. & Surg. Journal.*

12. *Tapping in Hydrocephalus.* The following case is extracted from the number of "the London Medical and Physical Journal" for May last. The subject was presented by Dr. CONQUEST to his class, at St. Bartholomew's Hospital.

"A girl of about two years of age had several signs of hydrocephalus, from a date soon after its birth, and for many months past the head had gradually increased, until it acquired an enormous size. The forehead was singularly broad, and the anterior fontanelle unus-

ually large. The pupils were permanently dilated ; the child slept almost incessantly, and frequently had two or three frightful convulsions during the day and night. Dr. CONQUEST operated some time since, before a large number of the pupils of the Hospital, by pushing a very beautifully constructed trocar into the right lateral ventricle. He introduced it obliquely, close to the edge of the right temporal bone, about midway between the crista galli process of the ethmoid bone and the anterior fontanelle, so as to avoid the longitudinal sinus on the one hand, and the corpus striatum on the other. The instrument entered about two inches below the scalp. An ounce and a half of bloody serum, mixed with portions of the cerebrum, escaped. The pulse became feeble, and temporary collapse followed. The fluid was allowed to escape stillicidium ; and within eight and forty hours, about two pints and a half flowed out of the opening. Almost immediately after the operation, the pupils became sensible to the stimulus of light : the drowsiness was succeeded by disinclination to sleep ; and the pulse, which had always before been remarkably slow, became about eighty. Two days after the operation, the brain evidenced signs of inflammation, with high constitutional disturbance ; and great alarm was excited by a rather formidable attack of convulsions. Leeches to the temples, and the constant application of cold to the head, subdued the local inflammation, and within twenty four hours all became tranquil. The head was well strapped, and from the cessation of cerebral excitement, no unfavourable circumstance occurred."

When this child was exhibited, every one was struck with the improvement of its appearance, and by the intelligence and cheerfulness of its countenance. Dr. C. stated that he considered the child perfectly well, and "as exhibiting a most gratifying and triumphant proof, that this seemingly formidable procedure might be safely and successfully adopted under similar circumstances."—*Ibid.*

13. *On the use of Salicia in the Treatment of Intermittent Fever.* Our readers are perhaps aware, and if they are not, we inform them, that salicia is a substance not long since discovered in the bark of the poplar—salix alba, by M. LEROUX, and an apothecary of Vitry le Franqais in France. M. MIQUEL was led from a large number of experiments to conclude, that this substance is equal, as a febrifuge, to the sulphate of quina. He has published in the Gazette Medicale, nine cases of intermittent fevers in which this remedy was employed. In eight the success was complete. In two, the disease was so mild, that it would probably have yielded readily without the use of any febrifuge. Some other cases were examples of the most simple form of intermittent fevers, which are usually with success managed by means of the sulphate of quinia. They were only cured after the salicia had been employed from two to five days. In one case, however, the disease was of long continuance, and had resisted the use of the Peruvian bark, opium, assafœtida, &c. In this case the salicia was completely successful. In the ninth case, the remedy

failed ; but it is to be observed, at the same time, that in this instance, the sulphate of quinia, in like manner, failed to render the desired effect.

The salicia is administered in larger doses than the quinia—from 18 to 20 grs. the first day—afterwards from 30 to 40 or even 50 grs. At whatever dose it is used, it does not give rise, as the sulphate of quinia sometimes does, to a burning sensation in the stomach, a circumstance which will cause it to be preferred to the latter in individuals with irritable stomach.—*Archives Generales, for January, 1830.—Ibid.*

14. *Treatment of Puerperal Mania.* In a letter addressed to the Editor of the London Medical and Surgical Journal, and inserted in the March number of that work, Dr. Blake, of Ipswich, sets down true puerperal mania as a disease very nearly allied in its nature to delirium tremens, "although it does not arise from precisely the same causes," nor observe exactly the same paroxysmal form.

"It is a well known fact," he remarks, "that during the greater part of the period of utero-gestation, the vascular system is in a highly plethoric state, and the blood itself exhibits, when drawn, properties similar to those which exist in it during the height of inflammation ;* now it must seem evident that such a condition, existing for so many months in the animal economy, cannot fail to act, through the medium of the blood-vessels, as a strong and continued stimulus to the brain and nerves ; it therefore ought not, in my mind, to appear surprising, that in peculiar states of the female constitution, mental alienation, or puerperal mania, should be the consequence of the sudden privation of such powerful and long accustomed stimulation, which is the natural result of parturition and its consequences. The brain and nervous system in this case suffer, subsequent to delivery, from the loss they have sustained by the sudden privation of that stimulus which was afforded to them during gestation, by the distension of the blood-vessels, and the stimulating nature of their contents, in the same way as I have explained delirium tremens† to supervene in subjects accustomed to the stimulus of ardent spirits, &c. &c. on the sudden cessation of their habitual intemperance. Like delirium tremens, also, this disease does not come immediately on the occurrence of the cause, but takes a given time, according to the nature of the constitution, and the degree of previous stimulation, before it becomes developed, and extreme debility in both cases is generally observed to precede the stages of delirium ; in short, puerperal mania seems to me to run a course, though generally much more protracted than that of delirium tremens, which would entitle both disorders to be arranged in the same class, order, and genus."

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* Vide Edinburgh Medical and Surgical Journal for Oct. 1823, or the London Medical and Physical Journal for Nov. of the same year.

† See a paper on the buffy coat of the blood, in the Medical and Physical Journal for November, 1829.

As regards the treatment, he says, "Our object should, of course, be to endeavour to induce such a state of the system as would resemble, in the greatest possible degree, that which existed previous to delivery. To effect this, the horizontal position should be carefully observed, in order to favour the ascent of the blood to the head; on the same principle the abdomen should be properly supported by a roller, and all drains on the system, such as giving suck, &c. should be particularly avoided. The various secretions should at the same time be carefully regulated, and local determinations relieved on general principles; during all this the strength ought to be supported by a light but nutritious diet, together with a moderate administration of diffusible stimuli, joined to sedatives, antispasmodics, and tonics, as the peculiarities of each case might indicate. These, with good air and the usual attentions, both moral and physical, which are found advantageous in the guidance of insane patients, are, apparently, the means most likely to prove efficacious in this often times very distressing nervous delirium; and on reference to the works of DENMAN, Professor BURNS, Drs. GOOCH, MARSHALL, HALL, ABERCROMBIE, RYAN, and others, they will not be found to differ essentially in principle from the *methodus medendi* proposed by these authors, although they have not taken the same view of the causes of the disorder that I have ventured to do."

He suggests the propriety of resorting, in extreme cases, to transfusion.—*Ibid.*

15. *Excision of the Knee Joint.* This has been performed by Mr. PARKS, of Liverpool, and Mr. CRAMPTON, of Dublin, with success. Mr. SYME has followed the example. His first case was John Arnot, aged eight years, whose left knee was much enlarged, and immovably bent at an acute angle with the thigh, with two sinuses on the inner side of the joint, which allowed a probe to reach the bone. Excision was performed. No dangerous irritation resulted, but much difficulty occurred from the contraction of the flexor muscles preventing the suitable apposition of the sections of the leg and thigh bone. This was gradually overcome by continued extensions and counter-extension. "Four weeks after the operation, the wound was all but healed, and the limb is now becoming every day more useful to the patient, who can already make considerable use of it in walking, though not yet provided with a high-heeled shoe."

In a second case, similar to the above, in a female aged seven years, excision was performed. The same difficulty wrs experienced from a contraction of the ham-strings, which could not be effectually obviated. In this case it was found that the os femoris was extensively denuded and diseased. The patient's strength became exhausted, and she died on the 8th of January. The operation was performed on the 28th of December.

16. *Premature Labour.* Dr. CAEPBELL gives a case of premature labour artificially excited, in the Edinburgh Medical and Surgical

Journal for April last. The fœtus was born alive, but afterwards perished from convulsions, in consequence of the injury received during birth. Dr. C. is a decided advocate for inducing premature labour in cases of moderate deformity of the superior strait; but contends that the child's safety is much endangered by puncturing the membranes and allowing the liquor amnii to escape. He says, it is merely necessary, by means of the finger, or a small catheter, *to separate the membranes from the uterus for a short distance.* Labour usually supervenes in from three to seven days; the patient should walk about, and occasionally take a cathartic. She should avoid straining, so that the membranes need not be ruptured, if possible, until the head is about to make its exit from the vagina. In this way the child suffers less from pressure.

17. When M. Wœlher, in 1828, published his method for obtaining the metal of alumina, by the decomposition of the chloride of aluminium by potassium, M. Bussy supposed from analogy, that glucinium might be obtained in a similar manner from the chloride of glucinium. Experiment showed the correctness of this opinion. Since then, he has been successful in insulating magnesium from the chloride of magnesium.

Preparation of the chloride of magnesium. Though magnesia at a red heat may be decomposed by chlorine, yet the chloride is obtained with difficulty in this way. It may, however, be obtained readily by previously mixing the magnesia with finely divided charcoal. For this purpose, M. Bussy mixes together equal parts of calcined magnesia and starch, by the aid of a little water, and divides the whole into small pieces, which are strongly calcined in a covered crucible. The pieces are then placed in a tube of porcelain, through which a current of chlorine is passed, and the tube heated to redness. After some time the chloride of magnesium runs along the tube, and solidifies at its extremity. It is in the form of a white crystalline mass, exhibiting, when broken, large, brilliant laminæ, slightly flexible, and having the aspect of spermaceti. It is very soluble in water, and of a sharp and bitter taste. When exposed to the air it attracts moisture very rapidly.

Preparation of the magnesium. A glass tube is selected, rather strong, about the third of an inch in internal diameter, and fifteen or twenty inches long, and bent at one end in the form of a retort. After having introduced five or six pieces of potassium, about the size of a pea, into the bent as well as the straight part of the tube, fragments of the chloride of magnesium are placed in it, separated from each other by bits of porcelain, to prevent them on fusion from running together into a mass. This portion of the tube is then heated, and when it has nearly attained a dull red heat, the potassium is made to pass in a state of vapour, by heating the bent part of the tube. A strong incandescence immediately occurs, which extends gradually throughout the whole tube. When the tube has cooled, the matter within it presents white metallic globules, disseminated in

the undecomposed chloride. When thrown into water, some hydrogen is disengaged, due to the presence of some potassium, and magnesia precipitated from the action of the potassa on the chloride, and brilliant globules, having the lustre and whiteness of silver, fall to the bottom of the vessel.

Properties of magnesium. White like silver. Very brilliant and very malleable. Fusible at a moderate temperature. Unalterable in dry air, but losing its metallic lustre in a moist atmosphere, in consequence of the formation of a superficial layer of oxide. When burnt in minute portions, it scintillates like iron in oxygen, but larger pieces are converted slowly and with difficulty into pure magnesia. Pure water deprived of air, has no action on it, unless when boiling, when a few bubbles of hydrogen are disengaged. Certain saline substances promote remarkably the decomposition of water by magnesium. Dilute acids dissolve it with disengagement of hydrogen. It unites with mercury, but not without the aid of heat, and destroys the fluidity of that metal even when present in very small quantity.

Ibid,

II. Analytical.

1. *Gerhard on the epidermic administration of Medicine.*—The peculiar speculations of the physicians of the physiological school have lately made this mode of administering medicine very popular, and as Dr. G. in the capacity of resident physician to the Philadelphia Almshouse, has had ample opportunities of testing the value of the practice we will present our readers with an abstract of a paper published by him in the N. Amer. Med. and Surg. Jour.

The violent constitutional effects occasionally following the application of poisonous agents to ulcerated surfaces have so long been familiar to the profession, that it is rather a matter of surprise that among the infinite variety of novelties, both practical and speculative, which are constantly claiming the attention of the profession, this mode of administering medicine without subjecting the patient to the inconvenience of tasting it, should not at an earlier period, have been more extensively employed.

Numerous circumstances may render the administration of medicine, per vias naturales inconvenient, sometimes imprac-

ticable, of these not the least in the estimation of the Broussaians, is the danger of producing irritation or inflammation of the mucous surface of the intestines. The local irritation which always accompanies or precedes intermittent fever is frequently such as to prevent the administration of the preparations of the bark when the system would be greatly benefitted by their use. In dropsical effusions preceded by inflammatory action, such is the proneness of the mucous surface to take on inflammation, that drastic purgatives, and even ordinary diuretics are precluded. Under these circumstances, medicines may be applied to the denuded cutis with as much confidence as by the usual mode of administration. Narcotics too are frequently applied with success, when opium could not be borne in any of the usual modes of administration, or when the stomach has become so habituated to its impression that it no longer acts as an anodyne.

Those medicines are best adapted for this mode of administration, which are unirritating, easily soluble, and whose active properties are concentrated in a small space. The more active vegetables, or their extracts, and some of the tinctures may be used with great propriety. Powerful chemical irritants on the one hand, and substances of little activity on the other, cannot be applied with any prospect of advantage.

Immediately after the application of an active agent to the cutis, considerable pain is the consequence. This local irritation is independent of the specific effects of the medicine, and tends to counteract it; and hence the most irritating remedies are seldom successful when applied in this way. Thus tartar emetic and other mineral substances afford very unsatisfactory results; croton oil and elaterium frequently fail while aloes purges actively.

As to the mode of application, dry substances may be sprinkled upon the part; but if moist and not easily pulverized, they may be reduced to a proper consistence, and spread upon the surface, or upon a piece of linen and applied to it. Fluids may be used as a lotion, or applied through the medium of a com-

press. Oily substances, and sometimes powders which are too irritating to be applied directly, may be mixed with cerate.

Cantharides are usually preferred for removing the cuticle. They are continued until sufficient irritation is produced, and their action completed by the application of warm poultices. The size will depend upon the nature of the agent; a surface of four inches square is usually found sufficiently large. At the first dressing a small portion of the cuticle may be raised, and the medicine applied under it;—at a subsequent dressing, the cutis becomes less irritable, and supports the action of the remedy with less pain.

The energy with which medicines act upon the system through the cutaneous tissue, depends much upon the vascularity and sensibility of the part to which they are applied, and upon its vicinity to the centre of circulation. The epigastrium is the most suitable place; though the anterior part of the neck and thorax, and the interior portions of the thighs and arms answer very well. The back and the extreme parts of the limbs do not possess sufficient powers of absorption, or sympathies with the vital organs sufficiently intimate, to be relied upon.

Corpulency, pregnancy, or great debility are unfavorable to the successful application of medicine in this way, and the temperament may be so irritable as to preclude the practice entirely. With respect to the dose, double or treble the quantity is usually necessary, and a much larger proportion may usually be born without inconvenience. Some medicines however, under favorable circumstances, operate as powerfully as when received into the stomach.

Tonics. The sulp. of quina when applied to the inflamed cutis, Dr. G. remarks produces considerable pain, lasting from a few minutes to a much longer period, according to the susceptibility of the patient. In a few hours the customary tonic effects of the medicine are visible. The dry red tongue which is frequently produced by the internal administration of tonics, rarely follows the endermic administration of quina.

Twenty cases of intermittent fever were treated by the endermic application of this remedy, and with perfect success,

except in three or four cases, in which accidental circumstances required its discontinuance. The blister was always applied during the apyrexia, and the application of the remedy, as under other circumstances, avoided during the paroxysm. In twelve cases the disease did not return after the first application, there was rarely more than one paroxysm, and a third in but a single instance. The average quantity applied was about twenty grains. It was generally remarked that the cure was more speedy than when the medicine was administered internally. After the paroxysms were arrested, the internal administration of the quina was resorted to prevent their recurrence.

A number of cases are detailed of which our limits will permit us to give but one.

Case 3. Mary Lonton, aged 20. Temperate habits. Admitted November 11th. Nine days since she was attacked with fever, which soon assumed an intermittent type. Has a chill daily at eleven o'clock, A. M. November 11th. Full, tense pulse, headach, &c. Ordered venesection oz xvi. seidlitz powders. 12th. Some fever during the interval; acet. ammon. Chill at eleven o'clock, venesection oz xiv. during the fever. Afternoon: no headach, cool skin, sulph. quina one grain every three hours during night, and every two hours next morning. 13th. Chill at the usual time; paroxysms less violent, apyrexia tolerably perfect; no headach, cool skin, pulse 86. Quina, one grain every hour. 14th. Chill again, but of rather shorter duration; seidlitz powders. Complains of tightness at the epigastrium. Ordered cups; and the quinia every two hours. 15th. Tightness at the epigastrium returned. Missed her chill for the first time. In the afternoon she was found in convulsions, to which she is subject, and which are always preceded by a sensation of tightness: pulse firm; venesection oz xvi. sinapisms: enemeta of senna tea. 16th. Pulse 104; feels better, no uneasiness at the epigastrium, cool skin: sinapism; dry cups to the back of the neck. Chill at the usual time, at eleven, P. M. pulse 86. Quinia every two hours during night. 17th. Chill returned with headach, pulse 94, dry skin; stop quinia. At half past ten o'clock, A. M. Dr. Jackson saw the patient, and directed a blister to the epigastrium, and quinia to be used as an endermic application: six grains were applied at eight P. M., six grains during the night, and the same quantity next morning. 18th. Pulse active; headach, but diminished in the evening: quinia continued; no chill. 19th. Slept well, scarcely any pain in the head; pulse 104, cool skin; moist, but slightly furred tongue. No chill at the usual time, but returned at seven P. M., with some headach; no tightness at the epigastrium; quinia dressings

continued in the former quantity. 20th. Restless night ; less headach, but complains of pain from the application : bowels costive ; quinia reduced to two grains three times a day, and mass. hydrarg : gr. v. rhei. pulv. gr. xv. *m.* to be given in pills : no chill. 21st. Very slight chill at seven P. M. ; continue applications. 22d. Slept well ; no headach ; cool skin ; moist tongue ; pulse 80 ; bowels open ; she has no chills ; pulse natural ; a little tightness at the epigastrium ; no change in treatment. 24th. Tightness at the epigastrium ; pulse 80 ; skin cool ; blister nearly dry ; quinia now suspended. At noon a convulsion came on : the usual remedies were employed, and the disease was perfectly removed in the evening. No medicines were administered after this period, as the patient was entirely convalescent, and recovered without another unpleasant symptom. This case is very interesting, as it illustrates the great practical advantage to be derived from the endermic treatment of intermittents. Although the quinia had been given with the greatest caution, all the symptoms were materially aggravated ; but the same remedy applied externally, even in an irritable subject, immediately converted the quotidian into a mild tertian, and in a short time effected an entire cure. Another patient in the ward at the same time, was treated with the most perfect success in the manner just described, after a fruitless internal administration of the ordinary medicine.

The character of the fever is not sufficiently defined to permit us to comment upon the treatment. The most of our readers, we think, however, will be struck with the freedom with which the lancet was used, and the substitution of seidlitz powders and cups, for the purgatives generally used where the physiological doctrines have not come in vogue. The inference in favor of the endermic treatment drawn from this case, may justly be questioned ; since if the unfavorable effect of the first administration of the quina arose from visceral congestion accompanied with inflammatory action, the copious venesection, and the interval of two days, after the first administration of the remedy, may have had a considerable influence in preparing the system for the administration of tonics. Without questioning the judgment of the Philadelphia physicians, we think that a Doctor of the old school, by convulsing the organs by the perturbating powers of calomel and scammony, would justly have calculated upon relieving this epigastric tightness, in a much shorter time, and by remedies, which to the majority of patients would appear much more simple.

The extract of cinchona as prepared by the Messrs. Weth-

erills, reduced to the semifluid state, effected in one case a very speedy cure.

Narcotics. The application of the different preparations of opium as a local application, has long been practised, and when administered with a view to their local effects, they have frequently been observed to bring the whole system under their influence. Powdered opium sprinkled upon a blistered surface, very soon manifests its specific effects. The dregs remaining after the preparation of the tincture, when united with cataplasms as a soothing ingredient for painful ulcers, frequently produce a constitutional impression so decided as to require their suspension. The tincture on account of the irritation it produces is inferior to the aqueous solution, and both are inferior to the black drop.

The sulphate and acetate of morphia exhibit the best form for the administration of this drug—since they possess great activity and may generally be applied without producing more than slight temporary irritation. The former is perhaps preferable, as the latter, under peculiar circumstances of great irritability, is liable on account of its greater insolubility to produce considerable pain. The morphia formed into a cerate, or perhaps more advantageously in the form of powder, in a quantity varying from 1 grain to 3 or 4 grs. according to the susceptibility of the patient may thus be applied. Dr. G. has collected a number of cases shewing that it may thus be advantageously used in intermittent fever, phthisis and other pulmonary affections, gonorrhea, neuralgia, rheumatism, and above all delirium tremens.

It is proper to notice that the endermic application of opium is sometimes followed by the same unpleasant after effects which result from its internal administration.

Satisfactory experiments have also been made with other narcotics. Six grains of the powdered digitalis sprinkled upon a blistered surface once a day, in one case reduced the pulse in a few days, from 120 to 75 strokes in a minute.

Purgatives. The operation of this class of medicines seems so intimately connected with the direct stimulation, (or more

properly irritation) of the intestinal membrane, that the facility with which many of them operate when applied to the surface, is certainly calculated to excite the surprise of the profession. Aloes is the best adapted for this mode of application. It produces little irritation, and operates in nearly the same dose as when taken internally. Gamboge operates with considerable activity, but is objectionable on account of its frequently producing great irritation. Other purgatives were applied with unsatisfactory results. Even croton oil was ineffectual.

Diuretics. Dropsical effusions are so frequently confined with inflammatory symptoms, that the administration of this class of medicines requires great caution. The endermic mode of application therefore becomes an object of much importance. Dr. G. in a few instances, has applied squills both alone, and in combination with digitalis, with a very good effect.

Emetics. All the vegetable emetics, when applied to blistered surfaces, operate readily. As all the active property of ipecacuanha is concentrated in emetine, it may be used with great advantage. Three minims of the oil of tobacco having been applied to a blister, a violent vomiting came on in a few minutes after its application, which after continuing through the night was with difficulty arrested. The local irritation produced by emetics from the mineral kingdom, generally prevents their specific effects.

The facility with which mercury produces its specific effects through the skin is well known. Even the more acrid preparations are said to have the same effect. Iodine which is also a very irritating substance, affects the system as readily as mercury.

Dr. G. concludes his essay with the following inferences.

1. That medicines applied to various parts of the body externally, provided they be placed in direct contact with the vascular surface of the cutis, produce similar effects in doses but little larger than when they are made to act directly upon the gastric mucous membrane.

2. All medicinal substances have a peculiar affinity for certain organs or tissues, which is entirely independent of their immediate action upon such parts.

3. That violent irritants or escharotics rarely produce any general effect, although this sometimes occurs.

4. All other articles of sufficient activity may be used, provided the cutis be not too highly inflamed ; when the latter is the case, soothing applications are in the first place necessary, or no absorption will take place.

5. The endermic medication is peculiarly useful in cases of extreme gastric irritability, and when it is important to modify morbid actions without impairing the integrity of a vital organ.

N. Amer. Med. and Phys. Jour.

Report of the Trial of Jonathan Martin, for setting fire to the York Minister. The destruction of the venerable cathedral of York, and the protracted trial of the incendiary, produced very considerable excitement at the time in England. Not a doubt existed as to the fact, but his examinations produced an universal conviction on the minds of medical men, that he was a decided monomaniac. We copy from the Medico-Chirurgical Review, the report of the testimony of two of the witnesses examined on the trial.

Caleb Williams, on his affirmation—examined by Mr. Sergeant Jones.—Q. You are a surgeon in the city of York, I believe ? A Yes. Q. Are you one of the medical attendants at the lunatic asylum, called the Friend's Retreat ? A. Yes. Q. Have you been conversant on the subject of the diseases of lunatics ? A. Yes, for five or six years. Q. When did you first of all see the prisoner at the bar, Martin, so as to observe his state of mind ? A. On the 21st of the present month. Q. How often have you seen him since that time ? A. Daily, with the exception of two days. Q. In the first place I would ask you, what appears to be the state of his mind ? A. I consider him to be what is denominated a "*monomaniac.*" *Baron Hullock.* Just state, for the information of the jury, what that is. A. It is a species of insanity, in which the delusion is confined to one idea only, or to one train of ideas. Q. Is that the expression that is well known and commonly used in medical treatises and discussions ? A. Yes. Q. It is opposed to delirium or delusionn, upon all subjects generally ? A. Yes. Q. Then first of all I ask you, whether you have taken pains to satisfy yourself, whether the symptoms or appearances of his insanity are feigned or bona fide ? A. I believe they are bona fide really. Q. Have you had any discourse with him on the subject of dreams ? A. I have. Q. What is your impression with regard to the influence of dreams upon the mind of the prisoner ? A. I believe his dreams to have more influence over him than they would have over a person of sound mind. Q. To what subject do the dreams of the prisoner apply ? A. Chiefly to the shbject of religion. Q. Did you also attend to his bodily strength ? A. I did. Q. Are there certain symptoms connected with his bodily strength-

that afford any influence with regard to the state of his mind ? A. There are. Q. Did the appearances which you witnessed with regard to the state of his body, concur, or run differently, with his state of mind ? what is your opinion with regard to the state of his mind, as derived from those appearances ? A. They confirmed my opinion with regard to the state of his mind. Q. How was the eye ? A. The eye was red. Q. I need hardly ask you, whether persons acquainted with medical subjects of this sort, look to the eye of the patient as a test of their state of mind ? A. The eye is frequently observed, certainly, and the countenance generally. Q. How was he as to his pulse ? A. It was full, hard, strong, and quicker than natural. Q. Is that state of the pulse the one commonly found in instances of monomania ? A. Yes, during the period of excitement it is common. Q. Do you think him a person that it would be safe to trust to go abroad ? A. I think the instances that have been given, prove that it is not safe for him to go abroad. Q. Then you are of opinion that he is insane ? A. Yes. Q. And that his madness is upon one particular subject, or upon one train of ideas ? A. Yes. Q. Are there many patients or persons in confinement who are laboring under monomania, and who have no other complaint? A. Yes, there are many ; I have opportunities of seeing many every week. *Baron Hullock.* Were it otherwise, he would not be denominated a monomaniac.

Crossexamined by Mr. Alderson. Q. Are not these monomaniacs capable of distinguishing right from wrong ? A. Not upon subjects upon which they are deluded. Q. But upon general subjects ? A. Upon subjects perfectly unconnected with their delusion they have the power of judging of right from wrong. Q. Upon those subjects upon which they are capable of so judging, they act like other persons capable of judging right from wrong ? A. Yes, frequently. Q. Do they avoid dangers consequent upon their actions ? A. Frequently. Q. Do they run away after having done a thing that they know is wrong ? A. Very commonly. Q. Do they adopt skilful means to avoid the consequence of such an act ? A. They are very cunning in escaping punishment. Q. And also very cunning in pursuing the means to accomplish an act ? A. Yes, the same. Q. You don't consider that that shows that they know, beforehand, that they are doing a wrong act ? A. No. Q. In what way would they show they were doing a wrong act : would they do it by staying, if they did know they had done a wrong act ? In what way do you, as a medical man, expect that insane persons would show it ? A. I should think that an insane man would endeavor to avoid being detected. Q. Then it is possible for a person, being an insane man, to do an act which he knows will be followed by punishment, and consequently endeavor to avoid it ? A. It is Q. Does not the fear of punishment deter them ? A. I believe the mind is so absorbed with the delusive idea, that no other idea occupies their attention. Q. Do you not know that persons who are insane are prevented from doing such acts through fear of

punishment ? A. No, that will not operate so as to prevent the delusion coming on. Q. What, in your judgment, is the peculiar subject upon which this person, the prisoner, is to be looked on as being mad ? A. An undue reliance upon his dreams, believing they are revelations of divine will, directing him to perform certain acts. Q. Has he told you that that is so ? A. Yes. Q. Have you any other reason for knowing it, than that he has told you so ? A. No. Q. Had you any other conversations with him before ? A. No. Q. When did you first see him ? A. On the 21st of this month. Q. That was the first day of the assizes ? A. Yes. Q. All your interviews have been with him since the judges came to town ? A. Yes. Q. Since that he has been telling you of his dreams. A. Yes.

Reexamined by Mr. Brougham. Q. You say you have had considerable experience in regard to the diseases of insane persons, from your attending a lunatic asylum ? A. Yes. Q. Do you consider, judging from your experience, that the conduct and appearance of this prisoner could have been put on with the view of deceiving you, or that it was otherwise than real ? A. I don't think it could.

Dr. Baldwyn Wake sworn—examined by Mr. Brougham. Q. You are a physician in York. A. Yes. Q. Have you had experience of lunatic patients ? A. Yes. Q. Are you physician to a lunatic establishment ? A. Yes, I am ; to the York Lunatic Asylum. Q. How long have you been so ? A. For thirteen years and upwards. Q. Have you seen the prisoner lately ? A. Since the 21st of this month, and also about three or four weeks ago, without his being aware I did see him. I looked through the window of Mr. Kilby's apartment. Q. Have you paid attention to his case lately ? A. Yes, I devoted an hour or two at a time, and investigated his case as carefully as time would allow me. Q. During the visits you have made, and you have seen him almost daily, you have investigated his case ? A. Almost daily ; and I have seen him occasionally twice a day. Q. Now, judging from what you have seen of him, and applying the result of your own experience in such diseases to him, is it your opinion that he is of sound or unsound mind ? A. Of unsound mind, most undoubtedly. Q. Of what description is the insanity he labors under ? A. *Monomania*. Q. Is that a frequent species of the complaint ? A. Very frequent ; there are a great many varieties, Q. But the characteristic of the whole of them is, that of being under a delusion on one particular point, and more or less sane upon other points ? A. Yes, sir ; that they have sanity upon most other points. Q. Did you observe any particular bodily infirmity about him ? A. Yes. Q. Had you occasion to observe his head ? A. I had. Q. What did you observe in regard to it ? A. I observed that it has the appearance, on the frontal bone, as if he had had a wound or accident, and upon enquiring as to it, he told me a long detail of his burning the Minster, nearly as has been stated before ; and in doing so, I observed that he suddenly put his hand to his head, and seemed quite lost for some time ; that attracted my attention more particularly towards his head, and when he was apparently sufficiently recovered to an

swer questions, I asked him what was the matter, and he said, "when I talk much, a pain strikes me at that place where I had received a wound." Q. Did you, in consequence of that observation, examine his head more particularly? A. Yes, I did. Q. What was the result of your examination? A. I found there was the mark of an injury there, and I enquired into the particulars of it. Q. I shall not trouble you to give a minute description of it, but you say there was apparently the remains of an injury? A. Yes. Q. Did you feel the marks of that injury with your hand? A. I did. Q. What effect did the pressure of your hand make upon it? A. Not much effect; but I found that there seemed to be some little depression upon that part, and I enquired something further about it. Q. I shall not ask you what he told you; did you make any enquiry as to his appetite? A. I did, and I found that he had a most voracious appetite. I went down in the cell when his wife came to him with his dinner, and I observed that he eat in the most voracious manner a beef stake pie, and he devoured it in a short time, although it appeared as much as any three men could have eaten. Q. Is that a symptom frequently attending the species of insanity you describe? A. It is an attendant symptom upon insanity generally, where the health is at the same time good. There is generally a voracious appetite, and he devours his food in a particular manner. Q. Did you observe his eye? A. I did. Q. What appearance had that? A. It was glassy, and when he was excited, it betrayed a great deal of *maniacal* expression, or appearance in it, which would strike any person accustomed to those diseased patients, so that they cannot mistake the nature of their complaint. Q. Could those bodily symptoms that you describe, have been put on for the purpose of deceiving you? A. I presume not. Q. Don't you believe they could not? A. I do firmly believe they could not; it is a mistake when I use the other expression, that I presumed it could not be assumed. Q. Had the pulse any thing to do with discovering the state of the patient? A. The pulse was uncommonly hard, and not very frequent. I examined the state of the heart, but I found the action of the heart did not account for the strong pulse, I therefore attributed it to his delusion, and to the state of his mind. That symptom is frequently attendant upon insanity, when there is a restlessness and excitement. Q. Is an inability to remain at rest one of the symptoms? A. I observed him when he did not know it, and perceived him walk up and down apparently five or six miles an hour; and that was his usual manner. Q. Was that observed frequently? A. Yes. Q. From the opportunities you had of seeing him upon those occasions you speak of, have you any doubt that he is a person of unsound mind? A. I have no doubt of it. Q. Is he a person capable of distinguishing right from wrong? A. Upon the subject of his delusion, I think not. I could state my reason for drawing that conclusion, if necessary, from another case that bears upon this one. Q. No, I don't ask you that, but I may ask you, if a person, who has a delusion upon one particular subject, and is, upon that subject, incapable of distinguishing right

from wrong, be capable, upon other subjects, of distinguishing right from wrong. A. Generally, they can do so upon other subjects. Q. Could you, upon other subjects, rely, even with certainty, on their distinguishing right from wrong? A. Yes. Q. Upon subjects generally, excluding those to which this delusion applies, I ask you, are insane persons under the influence of fear? A. I think upon maniacs in general, fear operates very powerfully. Q. And will they endeavor to effect their escape after they have done a wrong act? A. Yes, they will endeavor to elude punishment. Q. May a person laboring under this species of disease, called "monomania," be incapable of distinguishing right from wrong, and then doing that which we should call wrong, be able afterwards to know that they are likely to be punished for it? A. I think that when that delusion is frequently excited, a maniac does not know right from wrong; but then, after he has committed a crime, he may become sensible of his danger. I have known many instances of monomania, and I know that at certain times they have lucid intervals, and will be conscious of the error they have committed, and the delusion under which they labour; of this I know a striking case, if it were necessary upon this occasion to state it.

Baron Hullock summed up in a long, elaborate, and able manner. The fact of Martin's having set fire to the Minster was clear as the sun at noonday. But the question of culpability—that is to say, of sanity or insanity, rested entirely, or almost entirely, on the medical witnesses. The jury instantly acquitted him, on the plea of insanity—and every man of the slightest medical information, must acquiesce in the decision. We tender our thanks and the profession of sincere esteem to Dr. Baldwyn Wake and Mr. Williams.

We have adverted to this case not so much with the view of enlightening the mind of the profession on the subject of monomania, for the subject of Insanity generally occupies so important a place among the elementary studies of medicine, that few physicians of any science are unacquainted with the general principles of the subject, at least as a matter of scientific speculation; but for the purpose of urging them to embrace every opportunity of acquiring practical information upon this complicated and intricate question, and of impressing upon them the importance of disseminating correct information upon this subject.

Few persons are unaware of the fact that mental alienation may be infinitely diversified both in its symptoms and in its seat—that every faculty of the mind is liable to be perverted or

prostrated, exhibiting every conceivable variety of partial insanity.

So insensible are the gradations of mental aberration that it is frequently very difficult to draw the distinction between partial insanity, and peculiarity of temperament or manners; and when the former has been established, men of the greatest sagacity, and the most profound investigation, have failed to say where moral responsibility should cease.

The subject is thus frequently surrounded with difficulties, when divested of every circumstance calculated to elicit feeling, or enlist prejudice. When questions of this nature, therefore are brought before judicial tribunals, where very powerful prejudices, passions and interests frequently combine their influence to mislead public opinion, it would be indeed a matter of surprise, if its decisions were not frequently very unjust and oppressive. The lives and property of individuals, the peace and happiness of families, frequently depends upon this decision. Since therefore, correct and definite information upon this subject is confined almost entirely to those who study it professionally, it becomes the peculiar duty of physicians to correct the erroneous impressions which are so current in society.

The varieties and degrees of insanity are, as we before remarked, innumerable. In some rare instances, the different faculties of the mind, perception, imagination, judgment, and the moral and active faculties, are almost equally affected, and sometimes are so completely prostrated, that the individual is destitute of those feeble glimmerings of reason, and even of those instincts which attend the lower forms of animal life. Far more frequently, however, reason is more partially affected. Reason fancies herself at the helm, and still appears to maintain her supremacy, but she is hurried away by passion, misled by prejudice, spell bound by some prevailing hallucination, or distracted by false perceptions. "Distraction" says Erskine "sits beside her, holds her trembling on her seat, and frightens her from her propriety." Her efforts are still exerted, but it is under the direction, and in the defence of her enemies. Such

a man often reasons logically, and his deductions are false, only because his premises are the creatures of his imagination.

In partial insanity, the derangement is frequently confined to one particular subject, or train of ideas, which forms the subject of their delusion. Not only do such persons converse rationally upon ordinary subjects, but even on their peculiar hallucination they manifest great ingenuity and sagacity in defence of their false positions. The mind constantly directed to one subject, and stimulated by a morbid excitement, acquires a collection of facts, and a sagacity of applying them, far superior to what they possessed in health, and which is perfectly astonishing to those who are not familiar with the diseases of the intellect; and when subjected to a judicial investigation, they frequently avoid with the greatest art and address, the subject of their delusion. The close connection between madness and a certain species of wit, is one of those poetic truths which is confirmed by every day observation ; and cunning, so far from being an evidence of a sane mind, is frequently a characteristic of insanity.

Those who are accustomed to reflect upon the influence which prejudice and passion have over the opinions of mankind will, frequently pity the aberrations of intellect, where others see only objects of unmingled censure. When we reflect that wherever there is any room for the play of passion, the majority of the world judge rather from prejudice than from reason—that innovators in religion and politicks, as well as the enemies of both, in endeavoring to overturn established institutions, have always aimed rather at the vices of their advocates than the falsity of their opinions—that false principles of honor have dissolved every social obligation, and been made to supply the place of every virtue—that religion, whose very essence consists in the cultivation of benevolent feelings, has called to her aid instruments of torture, and that the strongest obligations, and the tenderest ties have been sacrificed to the cruel commands of an imaginary Deity, and hecatombs of human victims offered upon his altars—when we reflect upon the melancholy instances

of this nature which fill the pages of history, we will frequently be led to soften the asperity of our censure, and to ascribe to education, prejudice or fashion, what others attribute to moral obliquity. Nor will we be surprised if persons of warm sensibilities, whose education has been directed to objects of superficial ornament rather than of practical utility, or whose imagination or religious feelings have been highly cultivated, without being corrected by intercourse with the world, or habits of active industry, should have their judgment so distorted as to unfit them for the duties of life.

Not only is the judgment liable to be perverted by the imagination, but the passions frequently mislead it. Such is the influence of passion in stifling the voice of reason, that the common law very properly extenuates acts of violence committed under the excitement of sudden insult, or personal injury. And so completely is the voice of reason supposed to be hushed under the presure of certain injuries, that public opinion would justify almost any act of violence, although public expediency might require the punishment of the crime.

The case of an individual is truly unfortunate whom the passions and the imagination combine to mislead. Such are those persons in whom time and reflection increase instead of diminishing the sense of injury—in whom a suspicious and ever active imagination, by continually introducing a thousand imaginary grievances, excites a spirit of unrelenting hostility towards the most valuable friends. Such was the character of the celebrated Rousseau, a writer of the liveliest imagination, the finest talents, and the warmest heart, but who by his unreasonable suspicions, alienated the affection of his friends, and rendered his own life miserable.

The man must be strangely ignorant of the principles of human nature, or destitute of the finest principles of humanity, who can look upon the conduct of these persons with any other feelings than those of sympathy and kindness; or who by resenting their conduct, could add to the unhappiness of their condition. How far considerations of this kind should influence the principles of the law in criminal cases, is a very

intricate and difficult question. Yet many reasons might be assigned why the same humane principles which regulate our intercourse with the world, should be applied to the administration of the criminal law.

Individuals are frequently hurried away by an uncontrollable impulse—a morbid animal feeling, to commit acts of violence upon themselves or others. Such persons in their rational intervals are frequently aware of this propensity to mischief, and request to be confined to prevent its consequences. These individuals frequently conduct their designs with the greatest art and secrecy, and after the commission of an act of violence, generally take precautions to escape detection, or avoid punishment. The animal feelings in insanity are always in excess, and cowardice therefore, except when the nature of the delusion leasd to contempt of danger, is one of its characteristicks. The mono-maniac is fully sensible that the opinion of the world is against him, and his disease necessarily implies a knowledge of the consequences of crime. Nothing therefore could be more erroneous than the mode of reasoning very general, among even intelligent members of society, that because an individual conducts himself in the management of a criminal enterprise with caution and secrecy, he must necessarily be a moral agent, and amenable to the laws of his country.

In connection with this subject, we will merely offer a suggestion in relation to an opinion generally prevalent, and received as a settled principle in criminal jurisprudence ; which is, that monomania can be urged in extenuation of those crimes only, which are connected with the subject of the delusion. We do not pretend to lay down a general rule, or say how far the extenuation should be carried, but simply to remark that a monomaniac, however well he may occasionally converse and act, seldom has his judgment, imagination, passions, and affections sufficiently balanced, to constitute him a perfect moral agent; and the legal principle has long been settled, that no considerations of expediency should ever make an individual suffer for crimes, of which he is not *or cannot* be guilty—a principle as

honorable to the good sense as it is to the good feelings of the community in which it originated. It never can be good policy to inflict a punishment which would be revolting to the sentiments of enlightened humanity.

We shall say nothing of the obliquities of the moral sentiment. It is difficult to distinguish them from the effects of bad education and vicious habits, (indeed they often arise from these) and to these the policy of our laws extends no indulgence. The subject has never received the attention it merits.

We shall conclude these desultory, and too protracted remarks, by an additional extract from the same Review.

The Editor of this Journal was very much amused, one day, while visiting the Lunatic Asylum, in Florence, (where it is the custom to send all insane people, whatever their station in life,) by the conversations of a Priest and an Advocate, who were monomaniacs of such a harmless description that the keeper permitted them to accompany the Editor round the whole of the wards and cells of that great and wretched asylum. These two inmates of this gloomy retreat were men of considerable talents and learning. They described in most affecting terms, the various maniacs who paced the wards in musing melancholy or muttering soliloquies, as well as those who clashed their chains in solitary confinement. Not a word escaped either of them, in the slightest degree indicative of a disordered mind, till they came to a man who fancied himself to be JESUS CHRIST. The Barrister made a full stop, and seized the writer by the arm. "Thahk my stars," said he, glancing a look of ineffable contempt on the Priest, "I am free from those superstitious fears and visionary dreams by which the vulgar are kept in thraldom by designing knaves or ignorant enthusiasts! I worship the sun, the moon, the stars, the earth—in short, I worship NATURE, whatever form she may assume in the animal, vegetable, and mineral world around me, as well as in those orbs which shine resplendent in the heavens. I acknowledge no god but Nature."—At this moment, the Priest seized the other arm of the writer, and drew him forcibly aside. "You now see, Sir," said he, "that the unhappy and lost wretch who deals out this impious and atheistical creed is as complete a maniac as any of the numerous unfortunate beings whom we have been contemplating! He is otherwise harmless; but his words are pestilential, when he touches on the subject of divine revelation. I am, Sir, the only individual in this vast asylum, who is in his perfect senses. I am cruelly and unjustly confined here, and, as I see you are a physician, I hope you will exert your influence in rescuing me from the company of maniacs." The writer promised this exertion in the Priest's favour, but soon found that he, too, had his delusion. It turned out that the Barrister was not so insane upon religious topics as on some

others. His insanity was first discovered by a pathetic love-letter to a beautiful young English lady at Florence! It is notorious that the insane are perfectly conscious of the madness of their comrades, while they are totally blind to their own. But is not this the case with every eccentricity—even obliquity of intellect—every failing of human nature? F.

Rutgers Medical College. An introductory lecture, delivered at the College of Physicians and Surgeons of the City of New-York, November, 6, 1829. By JOHN B. BECK, M. D., *Professor of Materia Medica and Medical Jurisprudence in the University of the State of New-York.*

It was the wish of the individual whose name is appended to these remarks to have published something of the same character more than a year since, but the Editor at that time declined to admit them, from an unwillingness to involve himself in the controversies of distant and rival institutions. But in discussing the propriety and expediency of legislative interference to keep down rivalry among literary institutions, we are contending for an important principle in which every state of the Union has a common interest, and consequently, cannot subject ourselves to the imputation of taking part in controversies which do not belong to us.

Most of our readers, we presume, are aware of the circumstances under which Rutgers Medical College was established. A few years since, the professors in the Medical Department of the University of New-York, in consequence of a difficulty with the Regents, resigned their seats, and established a rival institution under the auspices of Rutgers College in New-Jersey. Laws founded upon the circumstance of the degrees being conferred by a Board resident in another state, having been passed by the Legislature with the design of preventing the Graduates of the New School from practising Medicine in the State of New-York, the institution was placed under the auspices of Geneva College. In the spring of 1829, the Professors applied to the State for a charter, and a bill for that purpose passed the Senate by a majority of four-fifths of that body, but not receiving the requisite majority of two thirds in the lower House, it failed to become a law. Since that time, we learn from the Newspapers, that the Supreme Court of that State, on a writ of *quo warranto*, have decided that the Trustees of Geneva College have no right to confer degrees upon the students of Rutgers Med. College.

Our attention has been again called to the subject by meeting with the Introductory Lecture of Dr. Beck—a production so far as style is concerned, every way worthy of the high repu-

tation of the author. But as our opinions differ very widely from his, and as our prejudices in favor of R. College are very strong, we regret that our limits permit us to extract only the conclusion of the address in justification of the strictures we feel ourselves called upon to make.

But not merely in this respect does this college challenge an advantage. By the constituted authorities of our state, she has always been viewed with special regard, and the honours conferred upon her graduates are of a peculiar value. Her diplomas emanating from the regents of the university, are strictly university honours, and not mere college ones. And in receiving them, the name of every candidate is made known to a body of illustrious men, identified with the literary and political history of our country.

All this, however, would be of little avail, were not the honours and privileges emanating from her, of an enduring character. History, not very remote. furnishes us with the melancholy instances of colleges, struggling through a feverish existence of a few years, which, either from some defect in their corporate powers, or some other equally fatal cause, have been blotted from existence, leaving not a single memorial behind them. To the reflections of its alumni, such a fate cannot be otherwise than distressing. Every man of honourable feelings is deeply attached to the alma mater where he received his education. There he first became conscious of the extent and power of his capacities. There his mind was formed to habits of thought and study. There he received the first impulses to high and noble achievement. There he formed associations which have swayed the whole destiny of his after life. Loaded with honours, he leaves her with regret. But he can never forget her. Amid the busy scenes of life, his purest thoughts are directed towards her ; and in the wane of manhood, as years steal over him, he enjoys a melancholy pleasure in gathering up the early recollections of his collegiate career. How embittered must all these recollections be, should some un-toward fortune have prostrated in the dust, the institution with which they are associated. When the Romans denounced their heaviest imprecation upon the person who should destroy the monument of his ancestors, they merely wished that he might outlive all his relatives and friends, supposing this to be the the greatest curse that could befal him. Quisquis hoc sustulerit aut jusserit, *ultimus moriatur*. Something like this must be the situation of one who finds himself outliving the institution from which he received all his literary or professional honours. Such a fate can never befall the graduate of this college. She has already stood the test of time. Safe in her rights, every year but adds to her security and multiplies her triumphs. And in the successive classes which are annually resorting hither, distinguished for their talents, industry, and enthusiasm, I witness the evidence and the pledge of her present safety and her future prosperity.

It is always painful to see great and ingenuous minds, attacking a rival—a rival too that is struggling with adverse circum-

stances, by arguments addressed to sentiments and prejudices that can have no place in a well regulated mind. A diploma from the university derives its whole value from the names of the professors attached to it ; any consequence it may receive from the university is altogether factitious, arising from the proneness of mankind to attach more importance to the name than the substance of things. Can the mere idea of a mechanical unintellectual corporation, chartered for conferring degrees, compare for one moment with the character and influence of the distinguished individuals at the head of the new Medical School. If this species of sentimentalism is entitled to any weight the advantages are entirely on the other side. There is an infinite pleasure in having a name attached to your diploma, which you are confident must be an object of admiration and envy so long as Surgery shall continue to be cultivated as a science, and long after the university and its rival School shall be forgotten. There is a pleasure also of a high order connected with the consciousness of having exerted an influence in favor of talents and merit, struggling against the influence of unjust and oppressive legislation, that is at least equal to the gratification of receiving literary honors from so distinguished an Alma Mater as the University of New-York.

It has fallen to our lot to have a full opportunity of observing the management and utility of collegiate instruction in the United States ; and we have no hesitation in saying that its advantages are very generally misapprehended, and its importance entirely overrated. There are no schools which have been estimated so extravagently, and which do so little to meet the public expectations, as those of Medicine. Before the invention of the art of printing, when learning was confined to the halls of universities, the treasures of science could be obtained only through the medium of public lectures ; but at the present time when the student, at an expense scarcely superior to that of a course of lectures, can collect in his study the united experience and observation of the profession, and can study, compare, and arrange at his leisure the opinions of the most distinguished men, a course of lectures can be useful only as subsidiary, and strictly subordinate to a well regulated plan of reading, and a judicious use of the other advantages which ought to be afforded by institutions of this kind. Lectures may be useful by establishing an elevated standard of professional excellence, by inspiring a love of fame and a professional feeling, by directing the labors of the student, and animating his progress ; but the variety and extent of the sciences subsidiary to medicine are too great to admit of any plan of oral instruction supplying the place of patient investigation in the study, and unremitted labor in the field of observation.

It requires a well regulated mind, with a very considerable

degree of information, to hear lectures with much advantage under any circumstances. But in the medical schools of this country, these things are managed in the worst possible manner. The great desideratum appears to be, to deliver the greatest possible number of lectures in the shortest time ; and consequently, the whole circle of medical literature is to be hurried through in the space of less than four months. That a person may form some idea of the imposition thus practised upon the world, let him imagine a young man, little acquainted with the principles of the profession, and still less with the habit of arranging his ideas with accuracy and order, to have arrived at the head quarters of Medical literature. Scarcely has he time to look around him before his arduous and unceasing labors commence. At 9 in the morning perhaps he hears an hours dissertation on the Materia Medica, in which pharmacy, chemistry, botany, and mineralogy are blended with Medical Jurisprudence and abstruse speculations on the *modus operandi* of medicines. The Institutes and Practice of Medicine follow, in which the nature, symptoms and treatment "of all the numerous ills that flesh is heir too" are detailed with scrupulous precision, and all the ridiculous speculations that have disgraced the profession for the last 2000 years, are called "up from the tomb of all the capulets" to undergo a serious refutation. Anatomy perhaps succeeds, and it is a subject of infinite humour, to see the professor surrounded by from 100 to 500 students, himself standing in a dark hole in the centre, demonstrating the minute anatomy of the eye or ear, or perhaps displaying some complicated structure, which the student must dissect repeatedly with great care before he can even name the parts when exposed fairly to his view ; and lecturing in the mean time, with the most inconceivable volubility, and with a multitude of the most uncouth and barbarous terms which the tongue was ever called upon to frame. The professor of Surgery follows; with equally favorable opportunities for the student to witness him cut among parts, where the deviation of the eighth of an inch in the point of the knife, would perhaps destroy life. In the afternoon come on chemistry and obstetricks, with perhaps a duplicate lecture or two on some one of the above subjects.

Exhausted and distracted by the laborious and varied mental exercise of the day, the student has the evening to recruit his spirits, to arrange and digest the information he has received during the day, and, if he has the pecuniary means, by his own labor to procure that anatomical knowledge, which ought to be his principal object in attending a course of Medical Lectures. Attendance on two courses of this routine of farce and humbug is called finishing an education, and next in order comes the diploma. And what does the diploma amount to ? An evidence that the gentleman thus dignified is qualified to practice medi-

cine? Nothing of the kind. Wealth may purchase the honor, the influence of friends may secure it, or dogged resolution in attending three or four courses of lectures will at length weary out the patience of the professors, and enable the veriest dunce in the Universe to carry off the prize. It amounts simply to shew that the persons who wear this distinguished honor have been able to raise the means to attend two courses of lectures.

This is a fair representation of that system of instruction that is pursued in every Medical College in the United States, a system that is supported at an expense of half a million of dollars annually—a system that is absurdly expected by a large portion of the community, to supply every defect of talents and industry, and transform men destitute of every qualification into accomplished physicians. We appeal to the public to say if it is not one of the greatest impositions ever palmed upon an enlightened age; if it is not perfectly inadequate to the objects in view, and at least five centuries behind the present condition of literary improvement. Yet the gentlemen at the head of these institutions who have in consequence an opportunity of lecturing themselves into notice, and thereby of rising above professional competition, with all the gravity of a Roman Augur, talk sentimentally about the attachment of young men to their Alma Mater; and from a generous attachment to the interests of literature, very modestly pray that they may be protected against competition.

A radical reform in this system is necessary, and as gentlemen who have enjoyed the advantages of these institutions, and derive much of their consequence from them will be backward in taking the necessary measures, we cannot conceive of any means so likely to be successful as the competition of rival schools, established in our large cities, whose professors may be urged by the pressure of *immediate and personal rivalry*, to place such advantages in the way of students, as will put down the petty establishments starting up in every corner of the country, where anatomy is taught without subjects, and the practice of medicine without patients.

To this we can see but two possible objections.

1st. That the standard of medical education may be lowered by the competition of numerous schools, striving to gain an ephemeral popularity by the facility with which they confer degrees. 2. That the competition will reduce the compensation of professors so low, that men of character and suitable qualifications will be unwilling to act in that capacity. These objections are not confirmed by experience.

1. The competition under a judicious system of instruction will probably be very little greater than it now is. Large cities alone afford the necessary opportunities for the advantageous study of medicine, and one of the most obvious results

of rival schools in the cities, is to break up the country establishments. The advantages of state patronage are such that none but men of tried character can establish a rival college, and consequently the great danger is of too little, rather than too much competition.

2. High salaries eventually prove disadvantageous to literary institutions. When they become greater than a fair compensation for professional labor, the office becomes an object of intrigue, and other qualifications than talents, industry and ambition open the door to preferment. "When our school was poor" said a Leyden professor to an Edinburgh student, "scholars flocked to it from every part of Europe, but since it has been richly endowed, they have gone to seek teachers whom great wealth has not disqualified for the task of instruction."

3. It is a great disadvantage attending all literary institutions, that professors when once elected are allowed, by a kind of prescriptive right, to retain their seats whether they satisfy public expectation, or not. Let these institutions be subjected to a powerful competition, and some gentlemen who have been for years filling their pockets by lecturing to empty seats, or by lecturing the seats empty, will be sent out to make their living, in a more honest and honorable manner.

4. Lastly, one most important advantage attending a collegiate course of instruction is that young men are brought in close contact with great minds, whose intercourse inspires a kindred feeling of emulation and generous ambition. The monopoly of a state institution inevitably creates an aristocracy, that keeps the common herd of students at a distance; but under a different state of things every student becomes a man of consequence, and every advantage is afforded to facilitate his labors, and animate him in his progress. F.

Jefferson Medical College.—The *Jefferson Medical College* was instituted in Philadelphia, in 1825, and, during its first session, was endowed by an act of the Legislature of Pennsylvania, with power to confer degrees in Medicine, and with all the privileges and prerogatives of similar Institutions, in our own country and in Europe.

The Sixth Session of the College will commence on the first Monday of November next, and, it is believed, under the most favourable auspices; every obstacle to its future advancement having been removed, and such measures adopted by the Board of Trustees, as will give a new impulse to the exertions of the faculty. Among these measures, it is thought proper to specify particularly, the appointment of Professor Drake, of Cincinnati, to the chair of the Practice of Medicine. His reputation as a lecturer is acknowledged, while his practical acquaintance with the diseases most prevalent in the Southern and Western sections of our country, in which a majority of the graduates in medicine may be expected to locate themselves, must greatly enhance the value of his instruction.

The additions which have been made to the Anatomical Cabinet, with the facilities afforded for dissection and demonstration, are such as will bear comparison with those of the oldest Medical Schools on this side of the Atlantic.

In all other respects it is confidently believed, it is not surpassed by any of its sister institutions, with *all* of which, as far as is known, it is placed on a footing of perfect equality—a course of Lectures in one, being held equivocal to a course on the same branches, in every other.

The Alms House and Hospital of the city afford ample opportunities to the student of acquiring clinical instruction, and hours are appropriated to this purpose. An Infirmary for diseases of the eye is also connected with the College, under the direction of the Professor of Surgery, who will operate in the presence of the class, where this is practicable.

The following is the organization of the Medical Faculty—viz:

Anatomy—By Samuel McClellen, M. D.

Materia Medica and Obstetrics—By John Eberle, M. D.

Chemistry—By Jacob Green, M. D.

Theory and Practice of Medicine—By Daniel Drake, M. D.

Surgery—By George McClellen, M. D.

Institutes of Medicine, Medical Jurisprudence, and the diseases of women and children—By B. Rush Rhees, M. D.

The fee for attendance on each course, is $15, or $90 for all the courses. The graduation fee is $15, and no other charge is made either on matriculation, or subsequently.

The whole expense is therefore less than $200, for the two full courses, required by law to entitle the student to graduation. One of these, at least, must be attended in this institution; and it is further required, that the candidate shall have studied three years (inclusive of the terms of attendance on the lectures) under the direction of a respectable practitioner of medicine,—and that he shall be twenty-one years of age—and having presented a thesis on some medical subject, shall give satisfactory evidence of his qualifications, on an examination by the Faculty, which takes place immediately after the close of each session.

The annual commencement for conferring the degrees, will not be delayed beyond the time requisite to complete the examination, that no unnecessary expense may be incurred by the student for board.—This may be procured in Philadelphia, at the rate of from two dollars and fifty cents to four dollars, in very respectable houses, to which the Janitor will furnish references, without charge.

Ten students are by law admitted gratuitously, each session, (the sum of twenty dollars only being paid by each, to meet the current expenses of the institution.) Application for the benefit of this provision, and all other communications to the Faculty, must be addressed to Samuel McClelland, M. D., Dean of the Faculty, at the Jefferson Medical College, 10th, near Walnut-street, Philadelphia. By order of the Faculty.

SAMUEL McCLELLEN, *Dean.*

Philadelphia, March, 1830.

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